# Data 7

Small Town Profiles

Small Town Profiles (1/90)
Small Town Profiles (2/90)

## Small Town Profile (ES-1)

	ID	ES-1
	Administrative	13-1
		W - " Cl Alandan
	Town	Wonji Shewa Alemtena
	Woreda	Adama Zuria
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	523983
	UTM-N (Adindan)	927885
	Altitude (m)	1539
No.	Item	
1	Population etc.	
1-1	Population (2014)	8,525
1-2	Category urban/rural	Urban
1-3	Satellite villages	3 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Amhara (40%), Oromo (35%), Others (25%)
		Public officer
1-6	Main occupation	
1-7	Grade of the town	None
1-8	Distance from paved road (km)	17
1-9	Rate of power failure (%)	7%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	Adama Town Water Supply Service Enterprise (treated river water)
2-1(2)	Operation time	2 days/week and 3 hrs/day (both season)
2-2	Pump	
2-2 (1)	Туре	not applicable
2-2 (2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2 (4)	Output (kW)  Cycle (Hz), speed (rpm)	not applicable not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)	not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes	not applicable not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	not applicable not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KVA)	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-4 (2) 2-4 (3) 2-4 (4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth diameter of pumping chamber Depth, diameter and material of screen Aquifer	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-4 (2) 2-4 (3) 2-4 (4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	not applicable

2-4 (8)	Pumping rate and draw down (actual)	not applicable
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	2
	Private connections (set)	31
2-5 (4)-3		0
2-5 (5)	Existence of water meter	installed and functioning
3	Operation and maintenance system	instance and renotioning
3-1	Organization	
3-1 (1)	Type	water committee not formally established & Adama Town WSSSE
3-1 (1)	Year of establishment	2008
3-1 (2)	Contact person	Sisay Abebe, Deputy Head of Kebele Administration, 0911-838107
3-2	Staffs	
3-2 (1)	Number of staffs	3
3-2 (1)	Experience of operator (year)	no operator
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	5 biп/m <sup>3</sup>
3-3 (2)	Collection rate (%)	100%
3-3 (3)		24.1
	The amount of the water used (m³/day)	24.1
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	cash in the village
3-4 (2)	Name of financial institutions	not applicable
3-4 (3)	Amount of remaining funds	not applicable
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	temporary collection
3-5 (2)	To whom ask to repair	Adama Town WSSSE
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50,000 - 60,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	6 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	3-10 (assumption)
5-2 (1)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	(200 (mountpriori)
6-1	Safe water supply volume (L/c/d)	2.8
6-2	Sufficiency rate of safe water (%)	4.6
7		
7	Any other water supply projects	None

Small Town Profiles (3/90)

Small Town Profiles (4/90)



## Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (ES-2)

	ID	ES-2
	Administrative	
	Town	Geldiya
	Woreda	Adama Zuria
	Zone	East Shewa
	Region	Oromia
		Oromia
	Coordinate	
	UTM-E(Adindan)	537805
	UTM-N (Adindan)	957201
	Altitude (m)	1561
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,257
1-2	Category urban/rural	Urban
1-3	Satellite villages	2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (80%), Amhara (20%)
1-6	Main occupation	Agriculture (farmer)
1-0	Grade of the town	4-C
1-8	Distance from paved road (km)	7
1-9	Rate of power failure (%)	7%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week and 6 hrs/day (both season)
2-2	Pump	
2-2(1)	Туре	submersible pump
	Manufacturer	no data
2-2 (2)		
2-2 (2)	Model, specification	no data
2-2 (3)	Model, specification	no data
2-2 (3) 2-2 (4)	Model, specification  Output (kW)	no data 11kW
2-2 (3)	Model, specification	no data
2-2 (3) 2-2 (4)	Model, specification  Output (kW)	no data 11kW
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	no data  11kW  no data no data
2-2 (3) 2-2 (4) 2-2 (5)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)	no data  HkW  no data
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)	no data  11kW  no data no data 9 years (since 2005)
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	no data  11kW  no data no data
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes	no data  11kW  no data no data 9 years (since 2005)  50mm (GS)
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes	no data  11kW  no data no data 9 years (since 2005)  50mm (GS)  6m/ 22.5 pieces
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	no data  11kW  no data no data 9 years (since 2005)  50mm (GS)
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source	no data  11kW  no data no data 9 years (since 2005)  50mm (GS)  6my 22.5 pieces installed and functioning
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	no data  11kW  no data no data 9 years (since 2005)  50mm (GS)  6m/ 22.5 pieces
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source	no data  11kW  no data no data 9 years (since 2005)  50mm (GS)  6my 22.5 pieces installed and functioning
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source	no data  11kW  no data no data 9 years (since 2005)  50mm (GS)  6my 22.5 pieces installed and functioning
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type	no data  11kW  no data no data 9 years (since 2005)  50mm (CS)  6mv 22.5 pieces installed and functioning public power supply
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification	no data  11kW  no data no data 9 years (since 2005)  50mm(CS)  6my 22.5 pieces installed and functioning  public power supply not applicable not applicable
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3 (1)  2-3(2)  2-3(3)  2-3(4)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kWA)	no data  11kW  no data no data 9 years (since 2005)  50mm (CS)  6mv 22.5 pieces installed and functioning public power supply not applicable not applicable not applicable
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification	no data  11kW  no data no data 9 years (since 2005)  50mm(CS)  6my 22.5 pieces installed and functioning  public power supply not applicable not applicable
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-3(5)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	no data  11kW  no data no data 9 years (since 2005)  50mm (CS)  6mv 22.5 pieces installed and functioning public power supply not applicable not applicable not applicable
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-3(5)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes	no data  11kW  no data no data 9 years (since 2005)  50nm (CS)  6m/ 22.5 pieces installed and functioning  public power supply  not applicable not applicable not applicable not applicable not applicable
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-3(5)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	no data  11kW  no data no data 9 years (since 2005)  50mm (CS)  6mv 22.5 pieces installed and functioning public power supply not applicable not applicable not applicable
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3 (2)  2-3 (1)  2-3 (2)  2-3 (4)  2-3 (5)  2-4  2-4 (1)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Penod of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds	no data  11kW  no data no data 9 years (since 2005)  50mm (CS)  6mv 22.5 pieces installed and functioning  public power supply not applicable not applicable not applicable not applicable not applicable not applicable 100 applicable
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (4) 2-4 (1) 2-4 (2)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kWA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole	no data  11kW  no data no data 9 years (since 2005)  50mm (CS)  6mv 22.5 pieces installed and functioning public power supply not applicable not applicable not applicable not applicable not applicable 150m/ world Vision 150m/ wpvC
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4 2-4 (1) 2-4 (2) 2-4 (3)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter Power source  Type  Manufacturer  Model, specification  Output (kWA)  Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole  Depth and material of borehole	no data  no data no data 9 years (since 2005)  50mm (CS)  6my 22.5 pieces installed and functioning public power supply not applicable not applicable not applicable not applicable 150my World Vision 150my uPVC 150my 150mm (6")
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4 (1) 2-4 (2) 2-4 (3)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kWA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole	no data  11kW  no data no data 9 years (since 2005)  50mm (CS)  6mv 22.5 pieces installed and functioning public power supply not applicable not applicable not applicable not applicable not applicable 150m/ world Vision 150m/ wpvC
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4 2-4 (1) 2-4 (2) 2-4 (3)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter Power source  Type  Manufacturer  Model, specification  Output (kWA)  Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole  Depth and material of borehole	no data  no data no data 9 years (since 2005)  50mm (CS)  6my 22.5 pieces installed and functioning public power supply not applicable not applicable not applicable not applicable 150my World Vision 150my uPVC 150my 150mm (6")
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4 (1) 2-4 (2) 2-4 (3)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Penod of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of soreen  Depth, diameter and material of screen	no data  no data no data no data 9 years (since 2005)  50mm (CS)  6mv 22.5 pieces installed and functioning  public power supply not applicable not applicable not applicable not applicable 100 applicable 101 applicable 102 applicable 103 applicable 104 applicable 105 applicable 105 applicable 106 applicable 107 applicable 108 applicable 109 applicable 109 applicable 109 applicable 100 applicable 100 applicable 100 applicable
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth and diameter of pumping chamber  Depth, diameter and material of screen  Aquifer	no data  11kW  no data no data 9 years (since 2005)  50mm (CS)  6m/ 22.5 pieces installed and functioning  public power supply  not applicable not applicable not applicable not applicable 150m/ uPVC 150m/ 150mm (6") 150m data 150 data

Small Town Profiles (5/90)

Small Town Profiles (6/90)

2-4(8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	137m
2-4 (9)	Transmission / distribution facilities	15/111
		FA (F
2-5 (1)	Dia., length and material of transmission pipe	50mm, 65mm/ no data/ CSP
2-5 (2)	Specification of distribution reservoir	25m³
2-5 (3)	Dia., length and material of distribution pipe	50mm, 40mm, 25mm/ no data/ GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	4
2-5 (4)-2	Private connections (set)	250
2-5 (4)-3	Cattle troughs (set)	2
2-5 (5)	Existence of water meter	all installed and 1 piece not functioning
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Туре	water committee
3-1 (2)	Year of establishment	2003
3-1 (3)	Contact person	Tilaye Gebre Kidan, Chairman, 0921-727779
3-2	Staffs	
3-2(1)	Number of staffs	14
3-2(2)	Experience of operator (year)	17 years
3-2 (3)	Operator's experience of training	yes (on site) for 1 week
3-3	Water tariff	
3-3 (1)	Water tariff	7 birr/m <sup>3</sup>
3-3 (2)	Collection rate (%)	100%
3-3 (2)	_	93.8
	The amount of the water used (m³/day)	95.8
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds Name of financial institutions	bank
3-4 (2)	ivame of innancial institutions	2003/ Oromia Credit & Saving Association/ Chora Chore Water Committee
3-4 (3)	Amount of remaining funds	yes/ 320,000 birr (bank) and 2,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	operator
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	10-20% of the total project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	7-10 birr/m3
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	1.69
5-2 (2)	Total hardness (mg/L)	106
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	41.6
6-2	Sufficiency rate of safe water (%)	69.1
7	Any other water supply projects	None
17	rany omer water supply projects	rone



## Legend

Small Town Profiles (7/90)
Small Town Profiles (8/90)

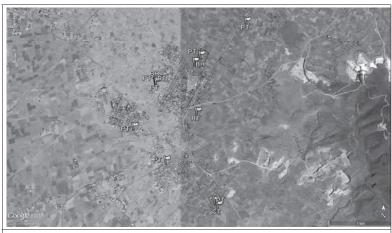
#### Small Town Profile (ES-3)

ID	ES-3
Administrative	
Town	Dire
Woreda	Ada
Zone	East Shewa
Region	Oromia
Coordinate	
UTM-E(Adindan)	488864
UTM-N (Adindan)	961034
Altitude (m)	1958
Item	
Population etc.	
	6,811
	Urban
Satellite villages	3 Kebeles
Increase/decrease after construction	increasing
	Oromo (97%), Amhara (3%)
	Agriculture (farmer)
	4-A
	12
	5%
	motorized borehole (2)
Operation time	4 days/week and 4 hrs/day (both BH1 and BH2 for both season)
1	, , , , , , , , , , , , , , , , , , , ,
Pump	
Pump Type	submersible pump (BH1 and BH2)
Туре	submersible pump (BH1 and BH2) no data
Type Manufacturer	no data
Туре	
Type Manufacturer	no data
Type Manufacturer	no data
Type Manufacturer Model, specification	no data no data
Type Manufacturer Model, specification Output (kW)	no data no data
Type Manufacturer Model, specification	no data no data ISkW
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	no data no data 15kW no data no data
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)	no data no data 15kW no data
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)	no data no data 15kW no data no data 3 years since Jan. 2011 (BHI), 17 years since 1997 (BH2)
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	no data no data 15kW no data no data
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes	no data no data  15kW no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2) 50mm (BH2)
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes	no data no data 15kW no data no data 3 years since Jan. 2011 (BHI), 17 years since 1997 (BH2) 50mm (BH2) 6m/ 23 pieces (BH2)
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	no data no data  15kW no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2) 50mm (BH2)
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source	no data no data  15kW  no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2)  50mm (BH2)  6m' 23 pieces (BH2) not exist (BH1 and BH2)
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	no data no data 15kW no data no data 3 years since Jan. 2011 (BHI), 17 years since 1997 (BH2) 50mm (BH2) 6m/ 23 pieces (BH2)
Type  Manufacturer  Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type	no data no data 15kW no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2) 50mm (BH2) 6m/ 23 pieces (BH2) not exist (BH1 and BH2) public power supply (both)
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source Type  Manufacturer	no data no data  15kW  no data no data a data so data so data no data for data no data for data data so data so data so data gray as since Jan. 2011 (BH1), 17 years since 1997 (BH2)  50mm (BH2) for 23 pieces (BH2) not exist (BH1 and BH2)  public power supply (both) not applicable
Type  Manufacturer  Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification	no data no data 15kW no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2) 50mm (BH2) 6m² 23 pieces (BH2) not exist (BH1 and BH2) public power supply (both) not applicable not applicable
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kWA)	no data no data  15kW  no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2)  50mm (BH2)  6m' 23 pieces (BH2) not exist (BH1 and BH2)  public power supply (both)  not applicable not applicable not applicable not applicable
Type  Manufacturer  Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification	no data no data 15kW no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2) 50mm (BH2) 6m² 23 pieces (BH2) not exist (BH1 and BH2) public power supply (both) not applicable not applicable
Type  Manufacturer  Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	no data no data  15kW  no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2)  50mm (BH2)  6m' 23 pieces (BH2) not exist (BH1 and BH2)  public power supply (both)  not applicable not applicable not applicable not applicable
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year)  Boreholes	no data no data  15kW  no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2)  50mm (BH2)  6m/ 23 pieces (BH2) not exist (BH1 and BH2)  public power supply (both)  not applicable not applicable not applicable not applicable not applicable not applicable
Type  Manufacturer  Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	no data no data  15kW  no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2)  50mm (BH2)  6m' 23 pieces (BH2) not exist (BH1 and BH2)  public power supply (both)  not applicable not applicable not applicable not applicable
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer Model, specification Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds	no data no data 15kW no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2) 50mm (BH2) 6m/ 23 pieces (BH2) not exist (BH1 and BH2) public power supply (both) not applicable not applicable not applicable not applicable BH1/ 1997/ NGO (Medical Sisters Mission), BH2/1987/ Government
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Existence of water flow meter Power source Type Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole	no data no data  15kW  no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2)  50mm (BH2)  6m' 23 pieces (BH2) not exist (BH1 and BH2)  public power supply (both)  not applicable not applicable not applicable not applicable not applicable 180m-BH1-1997/NGO (Medical Sisters Mission), BH2/1987/ Government
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole Depth and diameter of pumping chamber	no data no data  15kW  no data no data a years since Jan. 2011 (BH1), 17 years since 1997 (BH2)  50mm (BH2)  6m/ 23 pieces (BH2) not exist (BH1 and BH2)  public power supply (both)  not applicable not applicable not applicable not applicable not applicable 180m-BH1-1997/ NGO (Medical Sisters Mission), BH2/1987/ Government  180m-BH1-steel, 180m-BH2-steel 180m-300mm (BH-1) and 180m-200mm (BH-2)
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	no data no data 15kW no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2) 50mm (BH2) 6m/ 23 pieces (BH2) not exist (BH1 and BH2) public power supply (both) not applicable not applicable not applicable not applicable BH1/ 1997/ NGO (Medical Sisters Mission), BH2/1987/ Government 180m-BH1-steel, 180m-BH2-steel 180m-300mm (BH-1) and 180m-200mm (BH-2) no data
Type  Manufacturer  Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kWA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and diameter of pumping chamber  Depth, diameter and material of screen  Aquifer	no data no data  15kW  no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2)  50mm (BH2)  6m/ 23 pieces (BH2) not exist (BH1 and BH2)  public power supply (both) not applicable not applicable not applicable not applicable 10 applicable 10 applicable 10 applicable 10 to applicable 10 not applicable 11 som-BH1-steel, 180m-BH2-steel 11 som-BH1-steel, 180m-BH2-steel 11 som-30mm (BH-1) and 180m-200mm (BH-2) 11 not data
Type Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	no data no data 15kW no data no data 3 years since Jan. 2011 (BH1), 17 years since 1997 (BH2) 50mm (BH2) 6m/ 23 pieces (BH2) not exist (BH1 and BH2) public power supply (both) not applicable not applicable not applicable not applicable BH1/ 1997/ NGO (Medical Sisters Mission), BH2/1987/ Government 180m-BH1-steel, 180m-BH2-steel 180m-300mm (BH-1) and 180m-200mm (BH-2) no data
	Administrative Town Woreda Zone Region Coordinate UTM-E(Adindan) UTM-N (Adindan) Altitude (m) Item Population etc. Population (2014) Category urban/rural

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	160m(BH1)/ 140m(BH2)
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	3", 900m, GSP (BH1) / 2", no data, GSP (BH2)
2-5 (2)	Specification of distribution reservoir	25m³ (BH1) and 10m³ (BH2)
2-5 (3)	Dia., length and material of distribution pipe	2", 1.5km, GSP (BH1), no data (BH2)
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	7
2-5 (4)-2	Private connections (set)	90
2-5 (4)-3	Cattle troughs (set)	5
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	an instance (an innersoning)
3-1	Organization	
3-1 (1)	Туре	2 water committees for each borehole (BH1and BH2)
3-1 (1)	Year of establishment	1996 (Dire Medhanyalem, WC1) for BH1, 1987 (Dire Arerti, WC2) for BH2
3-1 (2)	Contact person	Worku Dadi (WC1), Kassahun Negusu (WC2), 0926-850523
3-2	Staffs	
3-2 (1)	Number of staffs	21
3-2 (1)	Experience of operator (year)	unknown for WC1, 5 years for WC2
3-2 (3)	Operator's experience of training	no for WC1, yes (2 days by Woreda office) for WC2
3-3	Water tariff	
3-3 (1)	Water tariff	6 birr/m <sup>3</sup> (WC-1) and 8 birr/m <sup>3</sup> (WC-2)
3 3 (1)	water and	60m/m (WC-1) and 80m/m (WC-2)
3-3 (2)	Collection rate (%)	yes (both WC1 and WC2)
3-3 (3)	The amount of the water used (m³/day)	64.9
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank for both WC1 and WC2
3-4 (2)	Name of financial institutions	1997, CBE-Bishoftu Branch, Dire Medhanyalem Water Committee for WC1, 1987, CBE-Bishoftu Branch, Dire Arerti Water Committee for WC2
3-4 (3)	Amount of remaining funds	yes/70,000 birr (bank) and 1,500 birr (cash) for WC1, unknown for WC2
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund for WCl and WC2
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes for WC1 and WC2
4-2	Maximum amount pay for construction	20% of the total project cost for WC1 and WC2
4-3	Intension to establish O&M organization	yes for WC1 and WC2
4-4	Set tariff per cubic meter	8 birr/m <sup>3</sup> for WC1 and WC2
4-5	Intension to pay for equipment replacement cost	yes for WC1 and WC2
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	4.49/2.44
5-2 (1)	Total hardness (mg/L)	188/172
6	Difficulty to access to safe water	100 172
6-1	Safe water supply volume (L/c/d)	9.5
6-2	Sufficiency rate of safe water (%)	16.1
7	Any other water supply projects	None
7	Any other water supply projects	Notic

Small Town Profiles (9/90)

Small Town Profiles (10/90)



## Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (ES-4)

	ID	ES-4
	Administrative	
	Town	Bofa
	Woreda	Boset
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	549706
	UTM-N (Adindan)	935610
	Altitude (m)	1426
No.	Item	A 160
1	Population etc.	
1-1	Population (2014)	4,185
1-2	Category urban/rural	Urban
1-3	Satellite villages	7 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (85%), Amhara (10%) & others (5%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	9
1-9	Rate of power failure (%)	7%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (2)
l `´		,
1		
2-1(2)	Operation time	7 days/week and 12 hrs/day (rainy season), 7 days/week and 24 hrs/day
(-)	- F	(dry season)
1		(dry season)
2-2	Pump	
2-2 (1)	Туре	submersible pump (BH1 and BH2)
2-2 (1)	Manufacturer	no data
		no data
2-2 (3)	Model, specification	no data
1		
2.2(4)	Output (AW)	10.71W
2-2 (4)	Output (kW)	18.5kW
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	no data no data
2-2 (5) 2-2 (6) 2-2 (7)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2)
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	no data no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2)
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2)
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both public power supply (both)
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both public power supply (both) not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both public power supply (both) not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA)	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both public power supply (both) not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both public power supply (both) not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(3) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both public power supply (both) not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both public power supply (both) not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(3) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both public power supply (both) not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-2 (10) 2-3 (2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both  public power supply (both) not applicable not applicable not applicable not applicable 1982-China (BH1), 2005-World Vision (BH2)
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both public power supply (both) not applicable not applicable not applicable not applicable 1982-China (BH1), 2005-World Vision (BH2) steel (both)
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 (1) 2-4 (2) 2-4 (2) 2-4 (3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Esistence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both  public power supply (both) not applicable not applicable not applicable not applicable 1982-China (BH1), 2005-World Vision (BH2)
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both public power supply (both) not applicable not applicable not applicable not applicable 1982-China (BH1), 2005-World Vision (BH2) steel (both)
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 (1) 2-4 (2) 2-4 (2) 2-4 (3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Esistence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both  public power supply (both) not applicable not applicable not applicable not applicable 1982-China (BH1), 2005-World Vision (BH2)  steel (both) no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(3) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of soreen Depth, diameter and material of screen	no data no data 8 years since 2006 (BH1) and 9 years since 2005 (BH2) no data 6m-9pcs (BH1), 6m-14pcs (BH2) installed and functioning for both  public power supply (both) not applicable not applicable not applicable not applicable soft ap

Small Town Profiles (11/90)

Small Town Profiles (12/90)

2-4(8)	Pumping rate and draw down (actual)	14.4m <sup>3</sup> /hr, no data (BH1) and 19.8m <sup>3</sup> /hr, no data (BH2)
2-4 (9)	Position of pump (depth)	56m (BH1) and 86m (BH2)
2-5	Transmission / distribution facilities	()
2-5 (1)	Dia., length and material of transmission pipe	3", 10396m, GSP
- ( ( )		,,,
2-5 (2)	Specification of distribution reservoir	25m <sup>3</sup> , 50m <sup>3</sup> , 50m <sup>3</sup>
2-5 (3)	Dia., length and material of distribution pipe	2.5"-2200m-GSP and 2", 2"-900m-HDP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	11
2-5 (4)-2	Private connections (set)	232
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1(1)	Туре	Bofa Town Water Supply Service Office
3-1 (2)	Year of establishment	2008
3-1 (3)	Contact person	Abebexh Yadete, Manager of Town Water Supply Service Office, 0921-728219
3-2	Staffs	120217
3-2 (1)	Number of staffs	11
3-2 (1)	Experience of operator (year)	3 operators with experience of 13 years, 2 years and 1 years
3-2 (2)	Operator's experience of training	yes (7 days in Mojo) for 3 operators
3-3	Water tariff	
3-3 (1)	Water tariff	$4.0\rm birr/m^3(publictap), 5.20\rm birr/m^3(0-3m^3), 5.8\rm birr/m^3(4-6m^3), 6.2\rm birr/m^3(7-10m^3), 7.1\rm birr/m^3(over11m^3)$
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	229.8
3-4	Remaining funds	227.0
3-4(1)	Where to keep remaining funds	bank
3-4(1)	Name of financial institutions	Sep. 2000, CBE Adama Branch, Bofa Town Water Supply Service Office
3 (2)		Sop, 2000, CDZ Nama Zanici, 2011 10111 Water Supply Service Since
3-4 (3)	Amount of remaining funds	yes/ 532,000 birr (bank) and 3,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	operator
4	Intension to participate in new project	
4-1	Intension to participate in new project	yes
4-2	Maximum amount pay for construction	129,000 birr or more
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	same as existing tariff
	par outlier interes	
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	1.96
5-2 (2)	Total hardness (mg/L)	130
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	54.9
6-2	Sufficiency rate of safe water (%)	92.2
7	Any other water supply projects	None





## Legend

Small Town Profiles (13/90)

Small Town Profiles (14/90)

## Small Town Profile (ES-5)

	ID	ES-5
	Administrative	
	Town	Bole
	Woreda	Boset
	Zone	East Shewa
	Region	Oromia
	Coordinate	Oroma
	UTM-E(Adindan)	582430
-	UTM-N (Adindan)	956118
-	Altitude (m)	1174
No.	Item	11/4
1	Population etc.	
1-1	Population (2014)	5,275
1-2	Category urban/rural	Urban
		1 town + 2 kebeles
1-3	Satellite villages	
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (75%), Amhara (10%) & others (15%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	3-C
1-8	Distance from paved road (km)	24
1-9	Rate of power failure (%)	8%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week and 14 hrs/day (both season)
2-2	Pump	
2-2 (1)	Туре	submersible pump
2-2 (1)	Manufacturer	Caprari
2-2 (3)	Model, specification	E6VX27/31+MC640-9V
2-2 (3)	Model, specification	ESVA2/I/SITMCO40-9V
2-2 (4)	Output (kW)	30kW, 400V
2-2 (5)	Cycle (Hz), speed (rpm)	50 Hz, 2850rpm
2-2 (6)	Total head (m)	195 m
2-2 (7)	Period of usage (installation month/ year)	4 years since Sep. 2010
2-2 (8)	Diameter/ material of riser pipes	65mm/ CSP
2=2 (6)	Diameter/ material of fiser pipes	OSHIII GSI
2-2 (9)	Unit length/total number of riser pipes	6m/ 32pcs
2-2 (10)	Existence of water flow meter	installed and functioning
2-3	Power source	
2-3(1)	Туре	diesel generator
2-3(2)	Manufacturer	Perkins
2-3(3)	Model, specification	1006-6TG
2-3(4)	Output (kVA)	100 kVA
2-3(5)	Period of usage (installation month/ year)	3 years and 4 months (since Sep. 2010)
2-4	Boreholes	
2-4(1)	Year of borehole construction/ funds	2010, Ethio-Italy
2-4(2)	Depth and material of borehole	steel
2-4(3)	Depth and diameter of pumping chamber	no data, 7"
2-4 (4)	Depth, diameter and material of screen	steel
2-4(5)	Aquifer	no data
2-4(6)	Static water level (m)	no data
2-4 (7)	Pumping rate and draw down (pumping test)	no data
	1 1 0	

2-4(8)	Pumping rate and draw down (actual)	25.2m <sup>3</sup> /hr, no data
2-4 (9)	Position of pump (depth)	194m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	3", 3800m, GSP
2-5 (2)	Specification of distribution reservoir	50m <sup>3</sup> , 10m <sup>3</sup>
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	11
2-5 (4)-2	Private connections (set)	251
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3		an instance (an functioning)
	Operation and maintenance system	
3-1	Organization	P. J. C. L. et al. Thomas West of Complete Co. 1 Com
3-1 (1)	Type	Bole-Golegota Town Water Supply Service Office
3-1 (2)	Year of establishment	Sep, 2013
3-1 (3)	Contact person	Tesfaye Mulatu, Manager, Water Supply Service office, 0912-217684
3-2	Staffs	
3-2(1)	Number of staffs	24
3-2(2)	Experience of operator (year)	16 years
3-2 (3)	Operator's experience of training	yes (15days at Arsi zonal WME office)
3-3	Water tariff	
3-3(1)	Water tariff	16.0 birr/m <sup>3</sup> (public tap), 17.0 birr/m <sup>3</sup> (0-5m <sup>3</sup> ), 17.5 birr/m <sup>3</sup> (6-10m <sup>3</sup> ), 18.5
33(1)	water and	birr/m <sup>3</sup> (11-30m <sup>3</sup> ), 20.0 birr/m <sup>3</sup> (over 30m <sup>3</sup> )
3-3(2)	Collection rate (%)	90 to 95%
3-3(3)	The amount of the water used (m <sup>3</sup> /day)	75.4
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	Sep. 2010, Cooperative Bank of Oromia Bole branch, Bole Golgota water supply service office
3-4 (3)	Amount of remaining funds	yes/ 464,647 birr (bank) and 500 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50% of the remaining fund
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	the water supply service office has plan to reduce tariff in case public electric power will be supplied by Ethiopian Electric power Corporation
4-5	Intension to pay for equipment replacement	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
		5 10
5-2	Water quality potential	1 26/1 62
5-2(1)	Fluoride (mg/L)	1.26/1.63 220/182
5-2 (2)	Total hardness (mg/L)	22U 102
6	Difficulty to access to safe water	142
6-1	Safe water supply volume (L/c/d)	14.3
6-2	Sufficiency rate of safe water (%)	23.4
17/	Any other water supply projects	On going (Oromia regional government)

Small Town Profiles (15/90)

Small Town Profiles (16/90)



## Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

#### Small Town Profile (ES-6)

	ID	ES-6
	Administrative	
	Town	Ude Dhankaka
	Woreda	Ada
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	504593
	UTM-N (Adindan)	959074
	Altitude (m)	1869
No.	Item	
1	Population etc.	
1-1	Population (2014)	5,763
1-2	Category urban/rural	Urban
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (85%), Amhara (15%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	0
1-9	Rate of power failure (%)	4%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	borehole with hand pump (3)
2-1(2)	Operation time	7 days/week and 24 hrs/day
2-2	Pump	
2-2(1)	Type	hand pump
2-2(2)	Manufacturer	various
2-2 (3)	Model, specification	India Mark 2 and AFRIDEV
2-2 (4)	Output (kW)	not applicable
1		
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
	Cycle (Hz), speed (rpm) Total head (m)	not applicable
2-2 (5) 2-2 (6) 2-2 (7)		not applicable not applicable 3 years for 3 hand pumps with borehole
2-2 (6)	Total head (m)	not applicable
2-2 (6) 2-2 (7)	Total head (m) Period of usage (installation month/ year)	not applicable  3 years for 3 hand pumps with borehole
2-2 (6) 2-2 (7) 2-2 (8)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes	not applicable  3 years for 3 hand pumps with borehole  no data
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	not applicable  3 years for 3 hand pumps with borehole  no data  no data
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	not applicable  3 years for 3 hand pumps with borehole  no data  no data
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	not applicable  3 years for 3 hand pumps with borehole  no data  no data  not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type	not applicable  3 years for 3 hand pumps with borehole  no data  no data  not applicable  not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	not applicable 3 years for 3 hand pumps with borehole no data not data not applicable not applicable not applicable not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	not applicable  3 years for 3 hand pumps with borehole  no data  no data  not applicable  not applicable  not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KVA)	not applicable  3 years for 3 hand pumps with borehole  no data  no data  not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	not applicable  3 years for 3 hand pumps with borehole  no data  no data  not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes	not applicable  3 years for 3 hand pumps with borehole  no data  no data  not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	not applicable  3 years for 3 hand pumps with borehole  no data  not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	not applicable  3 years for 3 hand pumps with borehole  no data  no data  not applicable  pot applicable  not applicable  not applicable  not applicable  pot applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	not applicable  3 years for 3 hand pumps with borehole  no data  not data  not applicable  sort applicable  not applicable  not applicable  not applicable  not applicable  not applicable  not applicable  2011/ Catholic Church  PVC  52m, no data  no data
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 (2) 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (5)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth diameter of pumping chamber Depth, diameter and material of screen Aquifer	not applicable 3 years for 3 hand pumps with borehole no data not data not applicable 2011/ Catholic Church PVC 52m, no data
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	not applicable  3 years for 3 hand pumps with borehole  no data  no data  not applicable  not applicable  not applicable  not applicable  not applicable  not applicable  pot applicable  not applicable

Small Town Profiles (17/90)

Small Town Profiles (18/90)

2-4(8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	no data
2-5 (1)	Dia., length and material of transmission pipe	not applicable
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	not applicable
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	not applicable
2-5 (4)-2	Private connections (set)	not applicable
2-5 (4)-3	Cattle troughs (set)	not applicable
2-5 (5)	Existence of water meter	not applicable
3	Operation and maintenance system	
3-1	Organization	
3-1(1)	Туре	water committee
3-1(2)	Year of establishment	Aug. 2011
3-1 (3)	Contact person	Bekele Shume, Secretary of Water Committee, 0911-081670
3-2	Staffs	
3-2(1)	Number of staffs	24
3-2(2)	Experience of operator (year)	no operator
3-2 (3)	Operator's experience of training	no operator
3-3	Water tariff	
3-3 (1)	Water tariff	10 birr/ month/ household
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m3/day)	0.0
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	2003, Cooperative Bank of Oromia Bishoftu branch, water committee
3-4(3)	Amount of remaining funds	yes/3,000 birr (bank) and 600 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	no breakdown in the past
4	Intension to participate in new project	1
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	no idea
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	12.5 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	0.71
5-2 (2)	Total hardness (mg/L)	250
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	0.0
6-2	Sufficiency rate of safe water (%)	0.0
7	Any other water supply projects	None
	rany omer water supply projects	TOTIC



## Legend

Small Town Profiles (19/90)

Small Town Profiles (20/90)

## Small Town Profile (ES-7)

	1_	
	ID	ES-7
	Administrative	
	Town	Bekejo
	Woreda	Ada
	Zone	East Shewa
	Region	Oromia
	Coordinate	OTOTAL .
	UTM-E(Adindan)	493382
-		952238
	UTM-N (Adindan)	
	Altitude (m)	1820
No.	Item	
1	Population etc.	
1-1	Population (2014)	6,624
1-2	Category urban/rural	Rural
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (95%), Amhara (5%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	25
1-9	Rate of power failure (%)	8%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
(-)		
2-1(2)	Operation time	7 days/week and 2 hrs/day (water is finished after 2 hours pumping)
2-1(2)	Operation time	/ days/week and 2 hrs/day (water is finished after 2 hours pumping)
2-2	Pump	
2-2(1)	Type	submersible pump
2-2 (2)	Manufacturer	Grundfoss
2-2(2)	Manufacturer	
		Grundfoss
2-2(2)	Manufacturer	Grundfoss
2-2 (2) 2-2 (3)	Manufacturer Model, specification	Grundfoss no data
2-2(2)	Manufacturer	Grundfoss
2-2 (2) 2-2 (3) 2-2 (4)	Manufacturer Model, specification Output (kW)	Grundfoss no data 7.5kW
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)	Grundfoss no data 7.5kW
2-2 (2) 2-2 (3) 2-2 (4)	Manufacturer Model, specification Output (kW)	Grundfoss no data 7.5kW
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	Grundfoss no data 7.5kW 50 Hz no data
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)	Grundfoss no data 7.5kW
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)	Grundfoss no data  7.5kW  50 Hz no data 27 years
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	Grundfoss no data 7.5kW 50 Hz no data
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes	Grundfoss no data  7.5kW  50 Hz no data  27 years 50mm/ CSP
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes	Grundfoss no data  7.5kW  50 Hz no data 27 years 50mm/ GSP 6m-16pcs
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	Grundfoss no data  7.5kW  50 Hz no data  27 years 50mm/ CSP
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes	Grundfoss no data  7.5kW  50 Hz no data 27 years 50mm/ GSP 6m-16pcs
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	Grundfoss no data  7.5kW  50 Hz no data 27 years 50mm/ GSP 6m-16pcs
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source	Grundfoss no data  7.5kW  50 Hz no data 27 years 50mm/ GSP  6m-16pcs not installed
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source	Grundfoss no data  7.5kW  50 Hz no data 27 years 50mm/ GSP  6m-16pcs not installed
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer	Grundfoss no data  7.5kW  50 Hz no data  27 years  50mm' CSP  6m-16pcs not installed  diesel generator  Deutz
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification	Grundfoss no data  7.5kW  50 Hz no data 27 years 50mm/ GSP 6m-16pcs not installed diesel generator  Deutz F44.912
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/year)  Diameter/material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA)	Grundfoss no data  7.5kW  50 Hz no data  27 years  50mm/ GSP  6m-16pcs not installed  diesel generator  Deutz F44.912 38 kVA
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification	Grundfoss no data  7.5kW  50 Hz no data 27 years 50mm/ GSP 6m-16pcs not installed diesel generator  Deutz F44.912
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	Grundfoss no data  7.5kW  50 Hz no data  27 years  50mm/ GSP  6m-16pcs not installed  diesel generator  Deutz F44.912 38 kVA
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 (2) 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year)  Boreholes	Grundfoss no data  7.5kW  50 Hz no data  27 years  50mm/ GSP  6m-16pcs not installed  diesel generator  Deutz F41-912 38 kVA 27 years (since 1987)
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	Grundfoss no data  7.5kW  50 Hz no data  27 years  50mm/ GSP  6m-16pcs not installed  diesel generator  Deutz F44.912 38 kVA
2-2 (2) 2-2 (3)  2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	Grundfoss no data  7.5kW  50 Hz no data 27 years  50mm/ CSP  6m-16pcs not installed  diesel generator  Deutz F44.912 38 kVA 27 years (since 1987)
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 (2) 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year)  Boreholes	Grundfoss no data  7.5kW  50 Hz no data  27 years  50mm/ GSP  6m-16pcs not installed  diesel generator  Deutz F41-912 38 kVA 27 years (since 1987)
2-2 (2) 2-2 (3)  2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	Grundfoss no data  7.5kW  50 Hz no data 27 years  50mm/ CSP  6m-16pcs not installed  diesel generator  Deutz F44.912 38 kVA 27 years (since 1987)
2-2 (2) 2-2 (3)  2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (10) 2-3 (2) 2-3 (1)  2-3 (2) 2-3 (4) 2-3 (4) 2-4 (2) 2-4 (2) 2-4 (3)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	Grundfoss no data  7.5kW  50 Hz no data  27 years  50mm/ GSP  6m-16pcs not installed  diesel generator  Deutz F41.912 38 kVA 27 years (since 1987)  1987/ no data  103.5m-steel no data/ 8°
2-2 (2) 2-2 (3)  2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-4 (1)  2-4 (2) 2-4 (3) 2-4 (4)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	Grundfoss no data  7.5kW  50 Hz no data 27 years  50mm/ GSP  6m-16pcs not installed  diesel generator  Deutz F44.912 38 kVA 27 years (since 1987)  1987/ no data  103.5m-steel no data/8" no data  1 no data/8" no data
2-2 (2) 2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (4)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth diameter and material of screen Aquifer	Grundfoss no data  7.5kW  50 Hz no data  27 years  50mm/ GSP  6m-l6pcs not installed  diesel generator  Deutz F4L912 38 kVA 27 years (since 1987)  1987/ no data  103.5m-steel no data/ 8" no data no data
2-2 (2) 2-2 (3)  2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-4 (1)  2-4 (2) 2-4 (3) 2-4 (4)	Manufacturer Model, specification  Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	Grundfoss no data  7.5kW  50 Hz no data 27 years  50mm/ GSP  6m-16pcs not installed  diesel generator  Deutz F44.912 38 kVA 27 years (since 1987)  1987/ no data  103.5m-steel no data/8" no data  1 no data/8" no data

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	65mm, 800m, CSP
2-5 (2)	Specification of distribution reservoir	25m <sup>3</sup>
2-5 (3)	Dia., length and material of distribution pipe	2", CSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	4
2-5 (4)-2	Private connections (set)	26
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	an instance (an innerioning)
3-1	Organization	
3-1 (1)	Туре	water committee
3-1 (1)	Year of establishment	1987
3-1 (2)	Contact person	Guchi Tulu, Chairman, Water Committee, 0921-719609
3-2	Staffs	
3-2 (1)	Number of staffs	13
3-2 (2)	Experience of operator (year)	5 month
3-2 (3)	Operator's experience of training	yes (2 days on site by Woreda office)
3-3	Water tariff	
3-3 (1)	Water tariff	22 birr/m <sup>3</sup>
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	33.0
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	unknown, CBE Bishoftu Branch, Bekejo water committee
3-4 (3)	Amount of remaining funds	yes/ 57,000 birr (bank) and 4,500 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	whatever amount is asked by the project
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	22 birr/m³ unless public power supply is connected
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	3.14
5-2 (2)	Total hardness (mg/L)	216
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	5.0
6-2	Sufficiency rate of safe water (%)	14.5
7	Any other water supply projects	None
,	Trity other water supply projects	None

Small Town Profiles (21/90)

Small Town Profiles (22/90)



## Legend

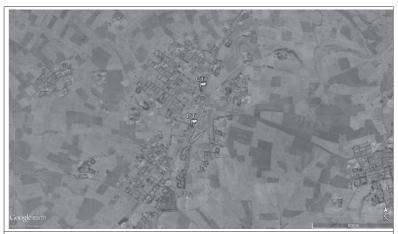
BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (ES-8)

	Silian	
	ID	ES-8
	Administrative	
	Town	Kamise
	Woreda	Lume
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	512241
	UTM-N (Adindan)	963884
	Altitude (m)	1938
NT.		1938
No.	Item	
1	Population etc.	1015
1-1	Population (2014)	4,846
1-2	Category urban/rural	Urban
1-3	Satellite villages	3 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (80%), Amhara (20%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	11
1-9	Rate of power failure (%)	Unelectrified
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	Gimbichu-Fentale Town Water Supply Service Enterprise (spring)
2-1(1)	intare includes	Ginblend-Fendae Fown water Supply Service Enterprise (spring)
2-1(2)	Operation time	5-6 days/week and 9 hrs/day (rainy season), 4days/week and 7 hrs/day
		(dry season)
2-2	Pump	
2-2(1)	Type	not applicable
2-2(2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
	D:16 6 11 1 1/ )	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (7)	Period of usage (installation month/ year)  Diameter/ material of riser pipes	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2-2 (8)	Diameter/ material of riser pipes	not applicable not applicable
2-2 (8)	Diameter/ material of riser pipes  Unit length/total number of riser pipes	not applicable not applicable not applicable
2-2 (8) 2-2 (9) 2-2 (10)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	not applicable not applicable
2-2 (8)	Diameter/ material of riser pipes  Unit length/total number of riser pipes	not applicable not applicable not applicable
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	not applicable not applicable not applicable not applicable not applicable not applicable
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type	not applicable not applicable not applicable not applicable not applicable
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	not applicable not applicable not applicable not applicable not applicable not applicable
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	not applicable
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	not applicable
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA)	not applicable
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	not applicable
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)  2-4 (2) 2-4 (3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Depth and material of borehole Depth and diameter of pumping chamber	not applicable
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)  2-4 (2) 2-4 (3) 2-4 (4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	not applicable
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)  2-4 (2) 2-4 (3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Depth and material of borehole Depth and diameter of pumping chamber	not applicable
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)  2-4 (2) 2-4 (3) 2-4 (4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	not applicable

Small Town Profiles (23/90)
Small Town Profiles (24/90)

2-4(8)	Pumping rate and draw down (actual)	not applicable
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	пот аррікавіє
2-5 (1)	Dia., length and material of transmission pipe	not applicable
2-3 (1)	Dia., length and material of transmission pipe	пот аррисаоте
2-5 (2)	Specification of distribution reservoir	not applicable
2-3 (2)	Specification of distribution reservoir	пот аррисание
2-5 (3)	Dia., length and material of distribution pipe	75mm, 65mm, and 40mm, no data and PVC
2.5 (4)	Painting and the same	
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	1
2-5 (4)-2 2-5 (4)-3	Private connections (set) Cattle troughs (set)	1
2-5 (4)-3	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	an instaned (an functioning)
3-1	Organization	
3-1 (1)	Туре	Water Committee/ Gimbichu-Fentale Rural Water Supply Service Enterprise
3-1 (1)	Year of establishment	Aug, 2010
3-1 (2)	Contact person	Kassa Zewdie, Chairman, 0911-944549
5 . (5)		
3-2	Staffs	
3-2(1)	Number of staffs	7
3-2(2)	Experience of operator (year)	not in the town
3-2 (3)	Operator's experience of training	not in the town
,		
3-3	Water tariff	
3-3(1)	Water tariff	6.25 birr/m <sup>3</sup>
		0.20 0.41 41
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	11.5
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	Gimbichu-Fentale Rural Water Supply Service Enterprise
3-4(2)	Name of financial institutions	not applicable
3-4(3)	Amount of remaining funds	not applicable
3-5	Procedure of repairing works	
3-5(1)	How to provide the fund for repair	temporary collection
3-5 (2)	To whom ask to repair	Gimbichu-Fentale Rural Water Supply Service Enterprise
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	200,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	10 Birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement	yes
	cost	
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	154 2.3
5-2(1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6 6-1	Difficulty to access to safe water Safe water supply volume (L/c/d)	2.4
6-1	Safe water supply volume (L/c/d) Sufficiency rate of safe water (%)	4
7	Any other water supply projects	None
1	Any omer water supply projects	None



## Legend

Small Town Profiles (25/90)

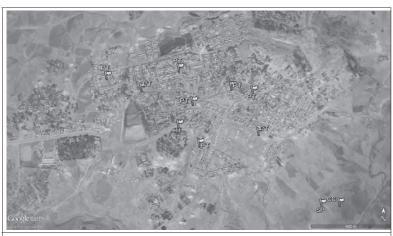
Small Town Profiles (26/90)

## Small Town Profile (ES-9)

	ID	ES-9
		E3-9
	Administrative	CL C.D.
-	Town	Chefe Donsa
	Woreda	Gimbichu
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	513210
	UTM-N (Adindan)	991145
	Altitude (m)	2414
No.	Item	
1	Population etc.	
1-1	Population (2014)	8,386
1-2	Category urban/rural	Urban
1-3	Satellite villages	2 kebele
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (75%), Amhara (16%) and Others (9%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	3-B
1-8	Distance from paved road (km)	34
1-9	Rate of power failure (%)	20%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized spring (1)
2 1(1)	intake identites	notorized spring (1)
2-1(2)	Operation time	7 days/week and 9 hrs/day (both season)
2-1(2)	Operation time	/ days/week and 9 ms/day (both season)
2-2	Pump	
2-2(1)	Туре	submersible pump
2-2(2)	Manufacturer	no data
2-2(3)	Model, specification	no data
2-2(4)	Output (kW)	18.5kW
2-2 (4)	Output (kW)	18.5kW
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	no data no data
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (5) 2-2 (6) 2-2 (7)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)	no data no data 2 years (August 2012)
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	no data no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes	no data no data 2 years (August 2012) 65mm/ CSP
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	no data no data 2 years (August 2012) 65mm/ GSP no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes	no data no data 2 years (August 2012) 65mm/ CSP
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	no data no data 2 years (August 2012) 65mm/ GSP no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	no data no data 2 years (August 2012) 65mm/ GSP no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	no data no data 2 years (August 2012) 65mm/ CSP no data installed but not working properly
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type	no data no data 2 years (August 2012) 65mm/ GSP no data installed but not working properly public power supply (standby diesel generator)
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	no data no data 2 years (August 2012) 65mm/ GSP no data installed but not working properly public power supply (standby diesel generator) Deutz
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	no data no data 2 years (August 2012) 65mm/ GSP no data installed but not working properly public power supply (standby diesel generator) Deutz F4I-912
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KVA)	no data no data 2 years (August 2012) 65mm/ GSP no data installed but not working properly public power supply (standby diesel generator) Deutz F4I.912 40 kVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	no data no data 2 years (August 2012) 65mm/ GSP no data installed but not working properly public power supply (standby diesel generator) Deutz F4I-912
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	no data no data 2 years (August 2012) 65mm/ GSP no data installed but not working properly public power supply (standby diesel generator) Deutz F4I.912 40 kVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA) Period of usage (installation month/ year) Boreholes	no data no data 2 years (August 2012) 65mm/ GSP no data installed but not working properly public power supply (standby diesel generator) Deutz F4I.912 40 kVA no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	no data no data 2 years (August 2012) 65mm/ GSP no data installed but not working properly public power supply (standby diesel generator) Deutz F4I.912 40 kVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	no data no data 2 years (August 2012) 65mm/ GSP  no data installed but not working properly  public power supply (standby diesel generator)  Deutz F4I.912 40 kVA no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	no data no data 2 years (August 2012) 65mm/ GSP no data installed but not working properly public power supply (standby diesel generator) Deutz F4J912 40 kVA no data 1983, government of Ethiopia no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	no data no data 2 years (August 2012) 65mm/ GSP  no data installed but not working properly  public power supply (standby diesel generator)  Deutz F4I.912 40 kVA no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	no data no data 2 years (August 2012) 65mm/ GSP no data installed but not working properly public power supply (standby diesel generator) Deutz F4J912 40 kVA no data 1983, government of Ethiopia no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole Depth and material of borehole Depth and diameter of pumping chamber	no data no data 2 years (August 2012) 65mm/ GSP  no data installed but not working properly  public power supply (standby diesel generator)  Deutz F4I.912 40 kVA no data 1983, government of Ethiopia no data no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (3) 2-4 (5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth diameter of pumping chamber Depth, diameter and material of screen Aquifer	no data no data 2 years (August 2012) 65mm/ GSP  no data installed but not working properly public power supply (standby diesel generator)  Deutz F4I.912 40 kVA no data 1983, government of Ethiopia no data no data no data no data no data
2-2 (6) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 (2) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4 (1) 2-4 (2) 2-4 (2) 2-4 (3) 2-4 (3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	no data no data 2 years (August 2012) 65mm/ GSP  no data installed but not working properly  public power supply (standby diesel generator)  Deutz F4I.912 40 kVA no data 1983, government of Ethiopia no data no data no data

2-4 (8)	Pumping rate and draw down (actual)	10.8 m <sup>3</sup> /hr, no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	2000m, 75mm, CSP
2-5 (2)	Specification of distribution reservoir	90 m <sup>3</sup>
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	10
2-5 (4)-2	Private connections (set)	920
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	an instance (an innerioning)
3-1	Organization	
3-1 (1)	Туре	Chefe Donsa Town Water Supply Service Office
3-1 (1)	Year of establishment	Oct. 2010
3-1 (3)	Contact person	Belete Taye, Manager of TWSS office, 0913-950132
3-2	Staffs	
3-2 (1)	Number of staffs	18
3-2 (2)	Experience of operator (year)	2 person, 10years and 3years
3-2 (3)	Operator's experience of training	old operator trained 2 weeks by East shewa zonal office/ new operator never trained
3-3	Water tariff	
3-3 (1)	Water tariff	5 Birr/m <sup>3</sup>
3-3 (2)	Collection rate (%)	90%
3-3 (3)	The amount of the water used (m³/day)	213.8
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	Oct. 2010, CBE Chefe Donsa branch, Chefe Donsa Town Water Supply Service office
3-4 (3)	Amount of remaining funds	yes/ 140,000 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund and temporary collection in case remaining fund is not enough
3-5 (2)	To whom ask to repair	Zonnal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	200,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	7 Binr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	` ` `
6-1	Safe water supply volume (L/c/d)	25.5
6-2	Sufficiency rate of safe water (%)	41.6
7	Any other water supply projects	On going (Oromia regional government)
	/	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8

Small Town Profiles (27/90)
Small Town Profiles (28/90)



## Legend

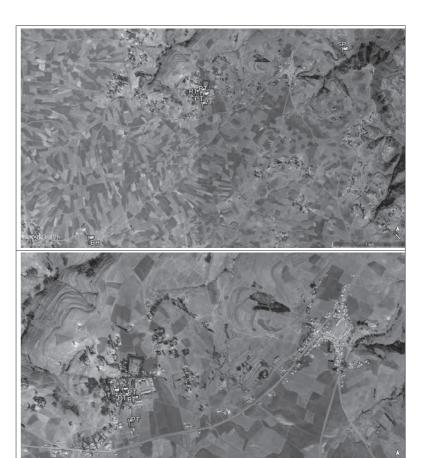
BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (ES-10)

	Tm.	EG 10
	ID	ES-10
	Administrative	
	Town	Areda
	Woreda	Gimbichu
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	529573
	UTM-N (Adindan)	1004272
	Altitude (m)	2520
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,752
1-2	Category urban/rural	Urban
1-3	Satellite villages	4kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Amhara (90%) and Oromo(10%)
	Main occupation	
1-6		Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	64
1-9	Rate of power failure (%)	Unelectrified
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	3 days/week and 4 hrs/day (both season)
2-2	Pump	
2-2(1)	Туре	submersible pump
2-2(2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	15kW
2-2(5)	Cycle (Hz), speed (rpm)	no data
2-2 (6)	Total head (m)	
		no data
2-2 (7)	Period of usage (installation month/ year)	no data 12 years (2012)
2-2 (7)	1	
2-2 (8)	Period of usage (installation month/ year)  Diameter/ material of riser pipes	12 years (2012) 2°/ GSP
2-2 (8)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes	12 years (2012) 2"/ GSP 6m-17pcs
2-2 (8) 2-2 (9) 2-2 (10)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	12 years (2012) 2°/ GSP
2-2 (8)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes	12 years (2012) 2"/ GSP 6m-17pcs
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer	12 years (2012)  2º/GSP  6m-17pes not installed  diesel generator no data
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification	12 years (2012)  2"/ GSP  6m-17pcs not installed  diesel generator no data no data
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (k/A)	12 years (2012)  2"/ GSP  6m-17pcs not installed  diesel generator no data no data no data
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	12 years (2012)  2"/ GSP  6m-17pcs not installed  diesel generator no data no data
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer  Model, specification Output (kWA) Period of usage (installation month/ year)  Boreholes	12 years (2012)  2"/ GSP  6m-17pcs not installed  diesel generator  no data no data no data 10 years (2002)
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds	12 years (2012)  2"/ GSP  6m-17pcs not installed  diesel generator no data no data 10 years (2002)
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)  2-4 (2)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification Output (KVA) Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole	12 years (2012)  2"/ GSP  6m-17pcs not installed  diesel generator no data no data no data 10 years (2002)  2001, no data 1180m, steel
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)  2-4 (2) 2-4 (3)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth and diameter of pumping chamber	12 years (2012)  2"/GSP  6m-17pcs not installed  diesel generator no data no data 10 years (2002)  2001, no data  180m, steel no data
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3 (1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)  2-4 (2) 2-4 (3) 2-4 (4)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth, diameter and material of screen	12 years (2012)  2"/ GSP  6m-17pcs not installed  diesel generator no data no data 10 years (2002)  2001, no data 180m, steel no data no data
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification Output (KVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth diameter of pumping chamber Depth, diameter and material of screen Aquifer	12 years (2012)  2"/ GSP  6m-17pcs not installed  diesel generator  no data no data 10 years (2002)  2001, no data 1180m, steel no data no data no data
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3 (1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)  2-4 (2) 2-4 (3) 2-4 (4)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth, diameter and material of screen	12 years (2012)  2"/ GSP  6m-17pcs not installed  diesel generator no data no data 10 years (2002)  2001, no data 180m, steel no data no data

Small Town Profiles (29/90)
Small Town Profiles (30/90)

2-4(8)	Pumping rate and draw down (actual)	16.7 m <sup>3</sup> /hr, no data
2-4 (9)	Position of pump (depth)	no data
2-4 (9)	Transmission / distribution facilities	no data
		50mm, no data, GSP
2-5 (1)	Dia., length and material of transmission pipe	Somm, no data, GSP
2-5 (2)	Specification of distribution reservoir	25m³
2-5 (3)	Dia., length and material of distribution pipe	50mm, no data, CSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	2
2-5 (4)-2	Private connections (set)	3
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1(1)	Туре	Water Committee
3-1 (2)	Year of establishment	2002
3-1 (3)	Contact person	Chara Dugma/ chairman/ 0920-465080
3-2	Staffs	
3-2(1)	Number of staffs	10
3-2(2)	Experience of operator (year)	l year
3-2 (3)	Operator's experience of training	1 day OJT on site by Woreda office
3-3	Water tariff	
3-3 (1)	Water tariff	25 Birr/m <sup>3</sup>
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	11.0
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	Apr. 2013, Cooperative Bank of Oromia Chefe Donsa branch, Areda Wera water committee
3-4 (3)	Amount of remaining funds	yes/ 2,229 birr (bank) and 103 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	no idea
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	25 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	0.79
5-2 (2)	Total hardness (mg/L)	204
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	4.0
6-2	Sufficiency rate of safe water (%)	6.7
	Any other water supply projects	None
7		



## Legend

Small Town Profiles (31/90)

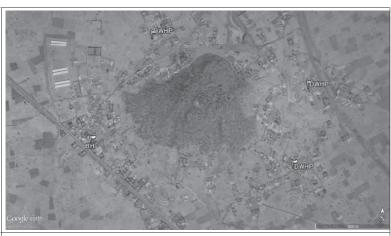
Small Town Profiles (32/90)

## Small Town Profile (ES-11)

	ID	ES-11
	Administrative	
	Town	Biyo
	Woreda	Lume
	Zone	East Shewa
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	507829
	UTM-N (Adindan)	956072
	Altitude (m)	1846
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,708
1-2	Category urban/rural	Urban
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (84%), Amhara (10%) & others (6%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	0
1-9	Rate of power failure (%)	4%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	borehole with windmill pump (1), hand dug well with hand pump (4)
2-1(2)	Operation time	no data
2-2	Pump	
2-2(1)	Туре	windmill pump
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	no data
2-2(5)	Cycle (Hz), speed (rpm)	no data
2-2(6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	15 years (1999)
2-2 (8)	Diameter/ material of riser pipes	no data
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	installed/ not working
2-3	Power source	
2-3(1)	Туре	windmill
2-3(2)	Manufacturer	no data
2-3(3)	Model, specification	no data
2-3(4)	Output (kVA)	no data
2-3(5)	Period of usage (installation month/ year)	15 years (1999)
2-4	Boreholes	
2-4(1)	Year of borehole construction/ funds	1999
2-4(2)	Depth and material of borehole	48m, steel
2-4(3)	Depth and diameter of pumping chamber	no data
2-4(4)	Depth, diameter and material of screen	no data
2-4(5)	Aquifer	no data
2-4(6)	Static water level (m)	no data
2-4(7)	Pumping rate and draw down (pumping test)	14.3 m <sup>3</sup> /hr

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data
2-5 (2)	Specification of distribution reservoir	$10\text{m}^3$
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1		1
2-5 (4)-2	Private connections (set)	0
2-5 (4)-3		0
2-5 (5)	Existence of water meter	installed and functioning
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Type	Water Committee
3-1 (2)	Year of establishment	1999
3-1 (3)	Contact person	Bahiru Begashaw, Chairman, 0931-299302
3-2	Staffs	
3-2(1)	Number of staffs	10
3-2 (2)	Experience of operator (year)	no operator
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	12.5 birr/m <sup>3</sup>
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	0.0
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	cash in the village and bank
3-4 (2)	Name of financial institutions	no data
3-4 (3)	Amount of remaining funds	no data
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	no data
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	100 birr/ household
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	25 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	( ) 9
6-1	Safe water supply volume (L/c/d)	0.0
6-2	Sufficiency rate of safe water (%)	0
7	Any other water supply projects	None
/	Triny other water supply projects	None

Small Town Profiles (33/90)
Small Town Profiles (34/90)



## Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (ES-12)

1	ID	ES-12
	Administrative	E3-12
	Town	Adulala
<b>-</b>	Woreda	Liben Zikuala
<b>-</b>		
	Zone	East Shewa
	Region	Oromia
	Coordinate	100000
-	UTM-E(Adindan)	489099
	UTM-N (Adindan)	943666
	Altitude (m)	1729
No.	Item	
1	Population etc.	
1-1	Population (2014)	3,882
1-2	Category urban/rural	Urban
1-3	Satellite villages	2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (95%) and Amhara (5%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	3-B
1-8	Distance from paved road (km)	34
1-9	Rate of power failure (%)	11%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week and 5 hrs/day (rainy season), 7 days/week and 8 hrs/day (dry
		season)
2-2	Pump	
2-2(1)	Туре	submersible pump
2-2(2)	Manufacturer	Pleuger
	Model, specification	no data
2-2 (3)	Model, specification	
	Model, specification	
2-2 (3)		no data
	Model, specification  Output (kW)	
2-2 (3) 2-2 (4)	Output (kW)	no data 7.5 kW, 400 V
2-2 (3) 2-2 (4) 2-2 (5)	Output (kW)  Cycle (Hz), speed (rpm)	no data 7.5 kW, 400 V 50 Hz
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	no data  7.5 kW, 400 V  50 Hz  190m@7m <sup>3</sup> /hr
2-2 (3) 2-2 (4) 2-2 (5)	Output (kW)  Cycle (Hz), speed (rpm)	no data 7.5 kW, 400 V 50 Hz
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr 21 years (Oct. 1993)
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	no data  7.5 kW, 400 V  50 Hz  190m@7m <sup>3</sup> /hr
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes	no data  7.5 kW, 400 V  50 Hz  190m@ 7m³/hr  21 years (Oct. 1993)  50mm, GSP
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m′ 15.5pcs
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	no data  7.5 kW, 400 V  50 Hz  190m@ 7m³/hr  21 years (Oct. 1993)  50mm, GSP
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source	no data  7.5 kW, 400 V  50 Hz  190m@ 7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pes installed and working
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m′ 15.5pcs
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, CSP  6m/ 15.5pcs Installed and working  public power supply (standby diesel generator)
2-2 (4)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer	no data  7.5 kW, 400 V  50 Hz  190m@ 7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz F4M1011F
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kWA)	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz  E4M1011F  27 kVA
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz F4M1011F
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-3(5)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz  E4M1011F  27 kVA
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-3(5)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kWA)  Period of usage (installation month/ year)  Boreholes	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, CSP  6m/ 15.5pcs Installed and working  public power supply (standby diesel generator)  Deutz  PatM1011F  27 kVA  18 years (July 1999)
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-3(5)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz  E4M1011F  27 kVA
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (10)  2-3 (2)  2-3 (1)  2-3 (2)  2-3 (4)  2-3 (5)  2-4  2-4 (1)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz F4M1011F  27 kVA  18 years (July 1999)
2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1) 2-4 (2)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kWA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, CSP  6m/ 15.5pcs Installed and working  public power supply (standby diesel generator)  Deutz  PatM1011F  27 kVA  18 years (July 1999)
2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3 (1)  2-3 (2) 2-3 (3) 2-3 (4) 2-4 (2) 2-4 (2) 2-4 (3)	Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth and material of pumping chamber	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz  F4M1011F  27 kWA  18 years (July 1999)  1989, Government  96m, steel no data, 6°
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-4 (1)  2-4 (2)  2-4 (2)  2-4 (4)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kWA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, CSP  6m/ 15.5pcs Installed and working  public power supply (standby diesel generator)  Deutz  E4M1011F  27 kVA  18 years (July 1999)  1989, Government  96m, steel
2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3 (1)  2-3 (2) 2-3 (3) 2-3 (4) 2-4 (2) 2-4 (2) 2-4 (3)	Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth and material of pumping chamber	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz  F4M1011F  27 kWA  18 years (July 1999)  1989, Government  96m, steel no data, 6°
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-4 (1)  2-4 (2)  2-4 (2)  2-4 (4)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth, diameter and material of screen  Depth, diameter and material of screen	no data  7.5 kW, 400 V  50 Hz  190m@7m³/nr  21 years (Oct. 1993)  50mm, GSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz F4M1011F 27 kVA 18 years (July 1999)  1989, Government  96m, steel no data, 6" no data
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4 (4) 2-4 (4) 2-4 (4) 2-4 (4) 2-4 (5)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kWA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth and diameter of pumping chamber  Depth, diameter and material of screen  Aquifer	no data  7.5 kW, 400 V  50 Hz  190m@7m³/hr  21 years (Oct. 1993)  50mm, CSP  6m/ 15.5pcs installed and working  public power supply (standby diesel generator)  Deutz  E4M1011F  27 kVA  18 years (July 1999)  1989, Government  96m, steel no data, 6° no data no data

Small Town Profiles (35/90)

Small Town Profiles (36/90)

2-4(8)	Pumping rate and draw down (actual)	14.4 m <sup>3</sup> /hr
2-4 (9)	Position of pump (depth)	93 m
2-4 (9)	Transmission / distribution facilities	93 III
2-5 (1)	Dia., length and material of transmission pipe	3", 1090m and GSP
2-3 (1)	Dia., length and material of transmission pipe	5 , 1090ili alid GSF
2-5 (2)	Specification of distribution reservoir	50 m <sup>3</sup> and 25m <sup>3</sup> (abandoned)
2-5 (3)	Dia., length and material of distribution pipe	2.5"-370m-GSP, 2"-322m-GSP, 1.5"-1300m-GSP
. (-)	11	
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	3
2-5 (4)-2	Private connections (set)	393
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1(1)	Туре	Adulala Town Water Supply Service Office
3-1(2)	Year of establishment	Oct, 2010
3-1 (3)	Contact person	Sisay Lemma/ Manager/ 0911-866658
3-2	Staffs	
3-2(1)	Number of staffs	11
3-2(2)	Experience of operator (year)	21 years
3-2 (3)	Operator's experience of training	Imonth at East Shewa zonal office
3-3	Water tariff	
3-3 (1)	Water tariff	5.0 birr/m <sup>3</sup> (public tap), 5.5 birr/m <sup>3</sup> (0-3m <sup>3</sup> ), 6.3 birr/m <sup>3</sup> (4-6m <sup>3</sup> ), 7.5 birr/m <sup>3</sup> (7-
3-3 (1)	water tariii	
		10m <sup>3</sup> ), 8.7 birr/m <sup>3</sup> (over 11m <sup>3</sup> )
3-3 (2)	Collection rate (%)	98%
3-3 (3)	The amount of the water used (m³/day)	142.1
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4(2)	Name of financial institutions	1993, CBE Adulala branch, Adulala Town Water Supply Service Office
3-4(3)	Amount of remaining funds	yes/ 330,719.72 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
5 5 (1)		
3-5 (2)	To whom ask to repair	Zonnal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	300,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	same as existing tariff
1	1	
4-5	Intension to pay for equipment replacement	yes
15	cost	750
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	1.79
5-2 (2)	Total hardness (mg/L)	172
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	36.6
	Sufficiency rate of safe water (%)	59.8
6-2		
6-2 7	Any other water supply projects	On going (One Wash Program)



## Legend

Small Town Profiles (37/90)

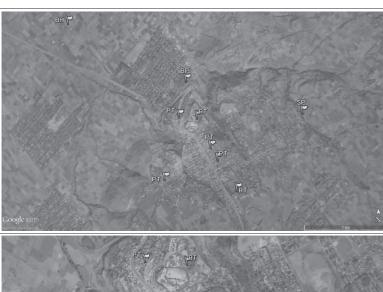
Small Town Profiles (38/90)

## Small Town Profile (AR-1)

	ID	AR-1
	Administrative	
	Town	Sire
	Woreda	Sire
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	553789
	UTM-N (Adindan)	914629
	Altitude (m)	1989
No.	Item	
1	Population etc.	
1-1	Population (2014)	11,097
1-2	Category urban/rural	Urban
1-3	Satellite villages	l kebele
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Amhara (60%) and Oromo(40%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	3-D
1-8	Distance from paved road (km)	17
1-9	Rate of power failure (%)	18%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1), motorized spring (1)
2-1(2)	Operation time	7 days/week-9 hrs/day (rainy season), 7 days/week-6 hrs/day (dry season)
2-2	Pump	
2-2(1)	Type	3 submersible pump (spring, borehole and booster station)
2-2 (2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	no data
2-2 (5)	Cycle (Hz), speed (rpm)	50 Hz
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	33 years since 1981(spring), 3 years since June 2010 (borehole and booster station)
2-2 (8)	Diameter/ material of riser pipes	50mm-GSP (spring), 65mm-GSP (borehole and booster)
2-2 (9)	Unit length/total number of riser pipes	6m-0.5pieces (spring), 6m-26pieces (borehole)
2-2 (10)	Existence of water flow meter	installed and working (3)
2-3	Power source	
2-3(1)	Туре	public power supply (spring), 2 diesel generators (borehole and booster station)
2-3(2)	Manufacturer	IVECO (2)
2-3(3)	Model, specification	F4GE0485C*F650 (2)
2-3(4)	Output (kVA)	85 kVA (2)
2-3(5)	Period of usage (installation month/ year)	3 years since June 2010 (2)
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	no data (spring), Jun 2010, UNICEF (borehole)
2-4(2)	Depth and material of borehole	172m, steel
2-4(3)	Depth and diameter of pumping chamber	6"
2-4 (4)	Depth, diameter and material of screen	no data
2-4 (5)		
	Aquiter	no data
	Aquifer Static water level (m)	no data
2-4 (6)	Static water level (m) Pumping rate and draw down (pumping test)	no data no data 21.6 m <sup>3</sup> /hr (borehole)/ 14.4m <sup>3</sup> /hr (spring)

2-4(8)	Pumping rate and draw down (actual)	12.5 m <sup>3</sup> /hr (borehole)
2-4 (9)	Position of pump (depth)	156 m (borehole)
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	4500m-3.5"-GSP, 2500m-3"-GSP
	,	
2-5 (2)	Specification of distribution reservoir	65m <sup>3</sup> , 50m <sup>3</sup> , 50m <sup>3</sup> (booster station)
2-5 (3)	Dia., length and material of distribution pipe	4"-400m-GSP, 2.5"-GSP, 2"-GSP, 1.5"-HDP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	21
2-5 (4)-2	Private connections (set)	516
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	<i>y</i>
3-1	Organization	
3-1 (1)	Type	Sire-Merfe Water Management Board
3-1 (1)	Year of establishment	Jun. 2010
3-1 (2)	Contact person	Belihu Bogale/ Chairman/ 0913-047753
3-2	Staffs	
3-2(1)	Number of staffs	11
3-2 (2)	Experience of operator (year)	2years (borehole), 5years (spring), 9years (booster pump)
3-2 (3)	Operator's experience of training	3 days on the job training
3-3	Water tariff	
3-3 (1)	Water tariff	22 birr/m³
3-3(2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	75.5
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4(2)	Name of financial institutions	Oct. 2012, CBE and Oromia Credit & Saving Bank, Sire-Merfe Water
. (3)		Management Board
3-4 (3)	Amount of remaining funds	yes/ 381,072 birr (bank) and 1,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office
4	Intension to participate in new project	
4-1	Intension to participate	ves
4-2	Maximum amount pay for construction	500,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	7-10 birr/m <sup>3</sup> in case connected to public power supply at borehole and
4-5	Intension to pay for equipment replacement	booster station yes
/c	Groundwater development potential	
5-1		10~
	Water quantity potential (L/sec)	10 ~
5-2	Water quality potential	0 = 0
5-2(1)	Fluoride (mg/L)	0.70
5-2 (2)	Total hardness (mg/L)	250
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	6.8
6-2	Sufficiency rate of safe water (%)	11.2
7	Any other water supply projects	On going (One Wash Program)

Small Town Profiles (39/90)
Small Town Profiles (40/90)





## Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

# Small Town Profile (AR-2)

	ID	IAD 2
	ID Administrative	AR-2
	Administrative	- 4
	Town	Bolo
	Woreda	Jeju
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E (Adindan)	563663
	UTM-N (Adindan)	911085
	Altitude (m)	2548
No.	Item	
1	Population etc.	
1-1	Population (2014)	1,579
1-2	Category urban/rural	Urban
1-3	Satellite villages	4 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (98%), Amhara (2%)
1-5		
	Main occupation	Merchant (employee)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	37
1-9	Rate of power failure (%)	7%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week-6 hrs/day (rainy season), 7 days/week-6 hrs/day (dry season)
2-2	Pump	
2-2(1)	Type	submersible pump
2-2(2)	Manufacturer	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	no data
2-2 (5)	Cycle (Hz), speed (rpm)	50 Hz
2-2 (6)	Total head (m)	no data
2-2 (7)		
	D 1 . C	
2.2(1)	Period of usage (installation month/ year)	14years since 2000
2-2 (8)	Period of usage (installation month/ year)  Diameter/ material of riser pipes	
2-2 (8)	Diameter/ material of riser pipes	14years since 2000 50mm/ GSP
2-2 (8)	Diameter/ material of riser pipes  Unit length/total number of riser pipes	14years since 2000 50nm/ CSP no data
2-2 (8) 2-2 (9) 2-2 (10)	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter	14years since 2000 50mm/ GSP
2-2 (8)	Diameter/ material of riser pipes  Unit length/total number of riser pipes	14years since 2000 50nm/ CSP no data
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	14years since 2000  50mm/ GSP  no data installed and working  public power supply (standby diesel generator)  Deutz
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	14years since 2000 50nm/ GSP no data installed and working public power supply (standby diesel generator) Deutz F31.912
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA)	14years since 2000  50mm/ GSP  no data installed and working  public power supply (standby diesel generator)  Deutz
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	14years since 2000 50nm/ GSP no data installed and working public power supply (standby diesel generator) Deutz F31.912
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	14years since 2000  50mm/ GSP  no data installed and working  public power supply (standby diesel generator)  Deutz  F3L912  27.5 kVA
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA)	14years since 2000  50mm/ GSP  no data installed and working  public power supply (standby diesel generator)  Deutz  F3L912  27.5 kVA
2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Cutput (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	14years since 2000  50mm/ GSP  no data installed and working  public power supply (standby diesel generator)  Deutz F31.912 27.5 kVA  14 years since 2000  2006/ Oromia regional government  no data/ steel
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)  2-4 (2) 2-4 (3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Borehokes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	14years since 2000  50mm/ GSP  no data installed and working  public power supply (standby diesel generator)  Deutz F31912 27.5 kVA  14 years since 2000  2006/ Oromia regional government  no data/ steel no data/ 6°
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3 (1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)  2-4 (2) 2-4 (3) 2-4 (4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of soreen Depth, diameter and material of screen	14years since 2000  50mm/ GSP  no data installed and working  public power supply (standby diesel generator)  Deutz  F3L912  27.5 kVA  14 years since 2000  2006' Oromia regional government  no data/ steel no data/ or no data/ or no data
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3 (1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)  2-4 (2) 2-4 (3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Borehokes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	14years since 2000  50mm/ GSP  no data installed and working  public power supply (standby diesel generator)  Deutz F31912 27.5 kVA  14 years since 2000  2006/ Oromia regional government  no data/ steel no data/ 6°
2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3 (1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)  2-4 (2) 2-4 (3) 2-4 (4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of soreen Depth, diameter and material of screen	14years since 2000  50mm/ GSP  no data installed and working  public power supply (standby diesel generator)  Deutz  F3L912  27.5 kVA  14 years since 2000  2006' Oromia regional government  no data/ steel no data/ or no data/ or no data

Small Town Profiles (41/90)
Small Town Profiles (42/90)

2-4(8)	Pumping rate and draw down (actual)	around 13m³/hr
2-4 (9)	Position of pump (depth)	no data
2-4 (9)	Transmission / distribution facilities	no data
		C5 1000 CCD
2-5 (1)	Dia., length and material of transmission pipe	65mm, 1000m, GSP
2-5 (2)	Specification of distribution reservoir	$40\mathrm{m}^3$
2-5 (3)	Dia., length and material of distribution pipe	2", no data, CSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	4
2-5 (4)-2	Private connections (set)	56
2-5 (4)-3	Cattle troughs (set)	1
2-5 (5)	Existence of water meter	all installed (Inot functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1 (1)	Туре	water committee
3-1 (2)	Year of establishment	2000
3-1 (3)	Contact person	Abe Menza/ Chairman/ 0920-394377
3-2	Staffs	
3-2(1)	Number of staffs	10
3-2 (2)	Experience of operator (year)	4 years
3-2 (3)	Operator's experience of training	no
3-3	Water tariff	
3-3 (1)	Water tariff	14 birr/m <sup>3</sup> for public taps and 18 birr/m <sup>3</sup> for private connection
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m <sup>3</sup> /day)	24.2
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	2000, Commercial Bank of Ethiopia Dera branch, Bolo Town Water Supply Station
3-4 (3)	Amount of remaining funds	yes/ 0.00 birr (bank) and 0.00 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	40% of project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	10 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.73
5-2 (2)	Total hardness (mg/L)	202
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	15.3
6-2	Sufficiency rate of safe water (%)	25.3
7	Any other water supply projects	None
1.	in in journer water supply projects	rone



## Legend

Small Town Profiles (43/90)

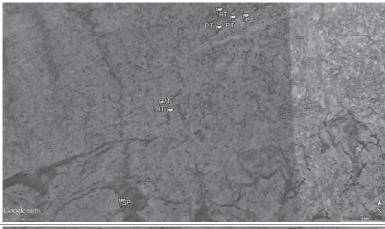
Small Town Profiles (44/90)

## Small Town Profile (AR-3)

	ID	AR-3
	Administrative	
	Town	Arboye
	Woreda	Jeju
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	575105
	UTM-N (Adindan)	926450
	Altitude (m)	2115
No.	Item	
1	Population etc.	
1-1	Population (2014)	7,272
1-2	Category urban/rural	Urban
1-3	Satellite villages	9 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (90%), Amhara (8%), Others (2%)
1-6	Main occupation	Merchant (employee), public officer
1-7	Grade of the town	4-A
1-8	Distance from paved road (km)	70
1-9	Rate of power failure (%)	17%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	spring with gravity system(1)
2-1(2)	Operation time	7 days/week-24 hrs/day (rainy season), 7 days/week-24 hrs/day (dry
		season), (available water collection time 1-3 hrs/day)
2-2	Pump	
2-2(1)	Туре	not applicable
2-2(2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2(5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)		not applicable
	Period of usage (installation month/ year)	
2-2 (8)	Diameter/ material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Туре	not applicable (gravity system)
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output (kVA)	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4 (1)	Year of borehole construction/ funds	1982, Arsi Rural Development Unit (ARDU)
2-4(2)	Depth and material of borehole	not applicable
2-4 (3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
L (+)		
2.4(5)		
2-4 (5)	Aquifer	not applicable
2-4 (5) 2-4 (6) 2-4 (7)	Static water level (m) Pumping rate and draw down (pumping test)	not applicable no data

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data, 3.5", CSP
2-5 (2)	Specification of distribution reservoir	$10\text{m}^3$ , $40\text{m}^3$
2-5 (3)	Dia., length and material of distribution pipe	GSP, uPVC
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	7
2-5 (4)-2	Private connections (set)	529
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (3 non functioning)
3	Operation and maintenance system	<i>y</i>
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	2006
3-1 (3)	Contact person	Kamilo Aliyi, Manager, 0911-700786
3-2	Staffs	
3-2(1)	Number of staffs	21
3-2 (2)	Experience of operator (year)	no operator
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	2 birr/m <sup>3</sup> for public taps, 2.75 birr/m <sup>3</sup> for private connection
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m3/day)	271.7
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	2006, CBE Arboye branch, Arboye Town Water Committee
3-4 (3)	Amount of remaining funds	yes, 10,500 birr (bank) and 0 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	water committee
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	5% of the total project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	3.5 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (1)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	(200 (unnumpriori)
6-1	Safe water supply volume (L/c/d)	37.4
6-2	Sufficiency rate of safe water (%)	59.3
7		None
1	Any other water supply projects	Notic

Small Town Profiles (45/90)
Small Town Profiles (46/90)





## Legend

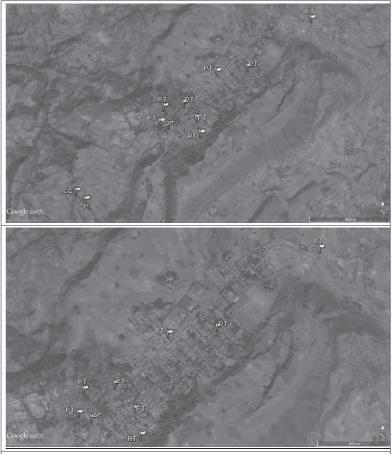
BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (AR-4)

	ID	AR-4
	Administrative	
	Town	Aseko
	Woreda	Aseko
	Zone	Arsi
	Region	Oromia
	Coordinate	Cronia
	UTM-E(Adindan)	612898
<b>-</b>	UTM-N (Adindan)	940113
<b>-</b>		
	Altitude (m)	2115
No.	Item	
l	Population etc.	
1-1	Population (2014)	5,283
1-2	Category urban/rural	Urban
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (56%), Amhara (36%), Others (8 %)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	91
1-9	Rate of power failure (%)	40%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized spring (1), spring on spot (1)
2-1(1)	intake facilities	introduzed spring (1), spring on spot (1)
2-1(2)	Operation time	7 days/week-4 hrs/day (rainy season), 7 days/week-4 hrs/day (dry season)
2-2	Pump	
2-2(1)	Туре	submersible pump
2-2(2)	Manufacturer	Grundfoss
2-2 (3)	Model, specification	no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	no data
2-2 (4)		no data
	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	
2-2 (5)	Cycle (Hz), speed (rpm)	no data
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	no data no data
2-2 (5) 2-2 (6) 2-2 (7)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)	no data no data 5 years, 2009
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes	no data no data 5 years, 2009
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	no data no data 5 years, 2009 65mm 1.5 m/ lpiece
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	no data no data 5 years, 2009 65mm
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	no data no data 5 years, 2009 65mm 1.5 m' Ipiece not installed
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	no data no data 5 years, 2009 65mm 1.5 m' Ipiece not installed public power supply (standby diesel generator)
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	no data no data 5 years, 2009 65mm  1.5 m' Ipiece not installed public power supply (standby diesel generator)  IVECO 30591
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	no data no data 5 years, 2009 65mm 1.5 m/ Ipiece not installed public power supply (standby diesel generator) IVECO
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	no data no data 5 years, 2009 65mm 1.5 m' Ipiece not installed public power supply (standby diesel generator) IVECO 30591 30 kVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KVA)	no data no data 5 years, 2009 65mm 1.5 m' Ipiece not installed public power supply (standby diesel generator) IVECO 30591 30 kVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 (2) 2-3(3) 2-3(4) 2-3(5) 2-4 (1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	no data no data 1.5 years, 2009 65mm 1.5 m/ Ipiece not installed public power supply (standby diesel generator) IVECO 30591 30 kVA 6 years since 2008
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	no data no data 5 years, 2009 65mm 1.5 m' Ipiece not installed public power supply (standby diesel generator) IVECO 30591 30 SVA 6 years since 2008 2009, Oromia Regional Government not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 (1) 2-4 (2) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	no data no data 15 years, 2009 65mm 1.5 m/ Ipiece not installed public power supply (standby diesel generator) IVECO 30591 30 kVA 6 years since 2008 2009, Oronia Regional Government not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of soreen Depth, diameter and material of screen	no data no data 5 years, 2009 65mm 1.5 m' Ipiece not installed public power supply (standby diesel generator) IVECO 30591 30 kVA 6 years since 2008 2009, Oronia Regional Government not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth diameter of pumping chamber Depth, diameter and material of screen Aquifer	no data no data 5 years, 2009 65mm 1.5 m' Ipiece not installed public power supply (standby diesel generator) IVECO 30591 30 kVA 6 years since 2008 2009, Oromia Regional Government not applicable not applicable not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (3) 2-3 (4) 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of screen Depth, diameter and material of screen	no data no data 5 years, 2009  65mm  1.5 m' Ipiece not installed public power supply (standby diesel generator)  IVECO 30591 30 kVA 6 years since 2008  2009, Oromia Regional Government not applicable not applicable not applicable

Small Town Profiles (47/90)
Small Town Profiles (48/90)

2-4(8)	Pumping rate and draw down (actual)	12.5 m³/hr
2-4 (9)	Position of pump (depth)	1.5 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	65mm-2300m-CSP, 50mm-150m-CSP
2-5 (2)	Specification of distribution reservoir	25m <sup>3</sup>
2-5 (3)	Dia., length and material of distribution pipe	3"-300m-GSP, 2.5"-GSP, 2"-552m-GSP, 1.5"-793m-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	6
2-5 (4)-2	Private connections (set)	66
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (2 not functioning)
3	Operation and maintenance system	an instance (2 not renectoring)
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (1)	Year of establishment	Apr. 2009
3-1 (3)	Contact person	Negash Mekennen, Chairman, 0920-932920
3-2	Staffs	
3-2(1)	Number of staffs	17
3-2(2)	Experience of operator (year)	5 years
3-2 (3)	Operator's experience of training	no
3-3	Water tariff	
3-3 (1)	Water tariff	9 bim/m <sup>3</sup>
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	46.3
3-4	Remaining funds	100
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	2012, Oromia Credit & Saving Association and CBE, Aseko branch, Aseko Town Water Committee
3-4(3)	Amount of remaining funds	yes, 27,400 birr (bank) and 0 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50,000 - 100,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	13 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	8.8
6-2	Sufficiency rate of safe water (%)	14.4
7	Any other water supply projects	None



## Legend

Small Town Profiles (49/90)

Small Town Profiles (50/90)

## Small Town Profile (AR-5)

	ID	AR-5
	Administrative	AR-5
	Town	Golegota
-	Woreda	Merti
-	Zone	Arsi
	Region	Oromia
	Coordinate	Oromaa
	UTM-E (Adindan)	582942
-	UTM-N (Adindan)	955787
	Altitude (m)	1163
No.	Item	4.4%
1	Population etc.	
1-1	Population (2014)	7,377
1-2	Category urban/rural	Urban
1-3	Satellite villages	1 town + 2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (75%), Amhara (10%) & others (15%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	24
1-9	Rate of power failure (%)	13%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
(-)		
2-1(2)	Operation time	7 days/week and 14 hrs/day (both season)
2-2	Pump	
2-2(1)	Туре	submersible pump
2-2(2)	Manufacturer	Caprari
2-2(3)	Model, specification	E6VX27/31+MC640-9V
2-2 (4)	Output (kW)	30kW, 400V
2-2(5)	Cycle (Hz), speed (rpm)	50 Hz, 2850rpm
2-2 (6)	Total head (m)	195 m
2-2(7)	Period of usage (installation month/ year)	4 years since Sep. 2010
2-2(8)	Diameter/ material of riser pipes	65mm/ GSP
2-2 (9)	Unit length/total number of riser pipes	6m/ 32pcs
2-2 (10)	Existence of water flow meter	installed and functioning
2-3	Power source	
2-3(1)	Туре	diesel generator
2-3(2)	Manufacturer	Perkins
2-3(3)	Model, specification	1006-6TG
2-3(4)	Output (kVA)	100 kVA
2-3(5)	Period of usage (installation month/ year)	3 years and 4 months (since Sep. 2010)
2-4	Boreholes	
2-4(1)	Year of borehole construction/ funds	2010, Ethio-Italy
2-4(2)	Depth and material of borehole	steel
2-4(3)	Depth and diameter of pumping chamber	no data, 7"
2-4(4)	Depth, diameter and material of screen	steel
2-4(5)	Aquifer	no data
2-4(6)	Static water level (m)	no data
2-4(7)	Pumping rate and draw down (pumping test)	no data

2-4 (8)	Pumping rate and draw down (actual)	25.2 m <sup>3</sup> /hr, no data
2-4 (9)	Position of pump (depth)	194 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	3", 3800m, GSP
2-5 (2)	Specification of distribution reservoir	50m <sup>3</sup> , 10m <sup>3</sup>
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	11
2-5 (4)-2	Private connections (set)	251
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3		an instance (an inictioning)
	Operation and maintenance system	
3-1	Organization	Digital was with a light company
3-1 (1)	Type	Bole-Golegota Town Water Supply Service Office
3-1 (2)	Year of establishment	Sep, 2013
3-1 (3)	Contact person	Tesfaye Mulatu, Manager, Water Supply Service office, 0912-217684
3-2	Staffs	
3-2(1)	Number of staffs	24
3-2(2)	Experience of operator (year)	16 years
3-2 (3)	Operator's experience of training	yes (15days at Arsi zonal WME office)
3-3	Water tariff	
3-3 (1)	Water tariff	16.0 birr/m³ (public tap), 17.0 birr/m³ (0-5m³), 17.5 birr/m³ (6-10m³), 18.5 birr/m³ (11-30m³), 20.0 birr/m³ (over 30m³)
3-3 (2)	Collection rate (%)	90 to 95%
3-3 (3)	The amount of the water used (m³/day)	105.3
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	Sep. 2010, Cooperative Bank of Oromia Bole branch, Bole Golgota water supply service office
3-4 (3)	Amount of remaining funds	yes/ 464,647 Birr (bank) and 500 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50% of the remaining fund
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	the water supply service office has plan to reduce tariff in case public electric power will be supplied by Ethiopian Electric power Corporation
4-5	Intension to pay for equipment replacement	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	- 10
5-2 (1)	Fluoride (mg/L)	1.26/1.63
5-2 (1)	Total hardness (mg/L)	220/182
		220/102
6	Difficulty to access to safe water	14.2
6-1	Safe water supply volume (L/c/d)	14.3 23.9
6-2	Sufficiency rate of safe water (%)	
/	Any other water supply projects	On going (Oromia regional government)

Small Town Profiles (51/90)

Small Town Profiles (52/90)



## Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (AR-6)

	ID	AR-6
	Administrative	AN*U
	Town	Gonde
	Woreda	Tiyo
	Zone	Arsi
	Region	Oromia
	Coordinate	Otomia
	UTM-E(Adindan)	521176
-	UTM-N (Adindan)	888123
<b>-</b>	Altitude (m)	2262
		2202
No.	Item	
1	Population etc.	
1-1	Population (2014)	3,434
1-2	Category urban/rural	Urban
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (43%), Amhara (32%), Silte (10%), Others (15%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	0
1-9	Rate of power failure (%)	6%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	spring with gravity system(1)
2-1(2)	Operation time	7 days/week-24 hrs/day (rainy season) , 7 days/week-24 hrs/day (dry season)
2-2	Pump	
2-2(1)	Type	not applicable
2-2(2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2(5)	Cycle (Hz), speed (rpm)	not applicable
2-2(6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)	Diameter/ material of riser pipes	
ı	Danketer material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable  not applicable
2-2 (9) 2-2 (10)		
2-2 (10)	Unit length/total number of riser pipes Existence of water flow meter	not applicable
	Unit length/total number of riser pipes	not applicable
2-2 (10) 2-3	Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	not applicable not installed
2-2 (10) 2-3 2-3(1)	Unit length/total number of riser pipes Existence of water flow meter Power source Type	not applicable not installed not applicable (gravity system)
2-2 (10) 2-3 2-3(1) 2-3(2)	Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	not applicable not installed not applicable (gravity system) not applicable
2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	not applicable not installed  not applicable (gravity system)  not applicable not applicable
2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KVA)	not applicable not installed not applicable (gravity system) not applicable not applicable not applicable
2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	not applicable not installed not applicable (gravity system) not applicable not applicable not applicable
2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	not applicable not installed not applicable (gravity system) not applicable not applicable not applicable not applicable Mar 2006, Town Administration and Water Board not applicable
2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3)	Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth and diameter of pumping chamber	not applicable not installed not applicable (gravity system) not applicable
2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	not applicable not installed not installed not applicable (gravity system) not applicable
2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (5)	Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth diameter of pumping chamber Depth, diameter and material of screen Aquifer	not applicable not installed not applicable (gravity system) not applicable
2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	not applicable not installed not installed not applicable (gravity system) not applicable

Small Town Profiles (53/90)

Small Town Profiles (54/90)

2-4(8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	посаррясанс
2-5 (1)	Dia., length and material of transmission pipe	not exist
	,. 5	
2-5 (2)	Specification of distribution reservoir	not exist
2-5 (3)	Dia., length and material of distribution pipe	75mm-100m-GSP, 65mm-500m-GSP, 40mm-400m-HDPE, 25mm-HDPE, 15mm-HDPE, 12mm-HDPE
		HOLE, IZHIIFHIOLE
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	5
2-5 (4)-2	Private connections (set)	278
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1 3-1 (1)	Organization Type	Gonde-Iteya Water Management Board
3-1 (1)	Year of establishment	1999
3-1 (2)	Contact person	Wado Kedir, Manager, 0912-064354
3-2	Staffs	18
3-2(1)	Number of staffs	
3-2 (2) 3-2 (3)	Experience of operator (year)  Operator's experience of training	no operator not applicable
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	5 birr/m³ (public taps), 4.25 birr/m³ (0-30m³) 5 birr/m³ (over 30m³)
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m3/day)	116.2
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4(2)	Name of financial institutions	1999, CBE Asela branch and Cooperation Bank of Oromia Iteya branch, Gonde-Iteya Town Water Management Board
3-4 (3)	Amount of remaining funds	yes, 1,300,000 birr (bank) and 500 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
2.5.(2)		Z WYZE C
3-5 (2)	To whom ask to repair	Zonal WME office
4 4-1	Intension to participate in new project Intension to participate	yes
4-2	Maximum amount pay for construction	200,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	7 - 8 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	33.8
6-2	Sufficiency rate of safe water (%)	56.2
	Any other water supply projects	None



## Legend

Small Town Profiles (55/90)

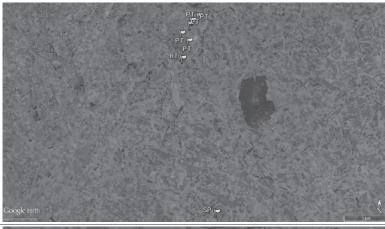
Small Town Profiles (56/90)

## Small Town Profile (AR-7)

	ID	AR-7
	Administrative	
	Town	Arbe Gebeya
	Woreda	Lodehetosa
	Zone	Arsi
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	547813
	UTM-N (Adindan)	898826
	Altitude (m)	2441
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,433
1-2	Category urban/rural	Urban
1-3	Satellite villages	2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (85%), Amhara (10%), Others (5 %)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	4-A
1-8	Distance from paved road (km)	28
1-9	Rate of power failure (%)	40%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	spring with gravity system (1), spring on spot (1)
2-1(2)	Operation time	7 days/week-24 hrs/day (rainy season), 7 days/week-24 hrs/day (dry season)
2-2	Pump	
2-2 (1)	Туре	not applicable
2-2 (1)	Manufacturer	not applicable
2-2 (2)	Model, specification	not applicable
2-2 (3)	Wodel, specification	пот аррисаозе
2-2 (4)	Output (kW)	not applicable
2-2(5)	Cycle (Hz), speed (rpm)	not applicable
2-2(6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)	Diameter/ material of riser pipes	not applicable
2-2 (9)		
	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Туре	not applicable (gravity system)
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
2-3(4)	Output (kVA)	not applicable
2-3(5)	Period of usage (installation month/ year)	not applicable
2-4	Boreholes	
2-4(1)	Year of borehole construction/ funds	May 1995, Oromia government
2-4(2)	Depth and material of borehole	not applicable
2-4(3)	Depth and diameter of pumping chamber	not applicable
2-4 (4)	Depth, diameter and material of screen	not applicable
2-4 (5)	Aquifer	not applicable
2-4 (6)	Static water level (m)	not applicable
2-4(7)	Pumping rate and draw down (pumping test)	no data
	- and me and draw down (bambing test)	

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	100mm-CSP, 75mm-CSP/uPVC
2-5 (2)	Specification of distribution reservoir	50m <sup>3</sup>
2-5 (3)	Dia., length and material of distribution pipe	75mm-CSP, 65mm-CSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	5
2-5 (4)-2	Private connections (set)	340
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (4 not functioning)
3	Operation and maintenance system	8/
3-1	Organization	
3-1 (1)	Type	water committee
3-1 (2)	Year of establishment	May 1995
3-1 (3)	Contact person	Demis Hailiye, Chairman, 0913-745174
3-2	Staffs	
3-2 (1)	Number of staffs	11
	Experience of operator (year)	1
3-2 (2) 3-2 (3)	Operator's experience of training	no operator not applicable
		пот аррисавіе
3-3	Water tariff	
3-3 (1)	Water tariff	1.5 birr/m³ plus 2 birr/month/connection as water meter rental fee
3-3 (2)	Collection rate (%)	85%
3-3 (3)	The amount of the water used (m³/day)	220.7
3-4	Remaining funds	Electrical Control of the Control of
3-4 (1)	Where to keep remaining funds	bank
3-4 (1)	Name of financial institutions	May 1995, CBE Huruta branch, Jimata Lode Water Committee
5-4 (2)	Traine of maneum institutions	May 1999, CBE Hardin Orlanda, Salanta Ebac Water Communice
3-4 (3)	Amount of remaining funds	yes, 10,200 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	10% of the project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	3.0 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (1)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	< 500 (assumption)
6-1	Safe water supply volume (L/c/d)	00.7
		90.7
6-2	Sufficiency rate of safe water (%)	131.1
1	Any other water supply projects	None

Small Town Profiles (57/90)
Small Town Profiles (58/90)





## Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

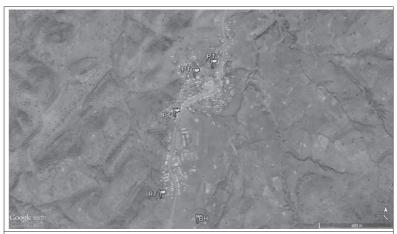
## Small Town Profile (WH-1)

	ID	WH-1
	Administrative	
	Town	Chorora
	Woreda	Anchar
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	641097
	UTM-N (Adindan)	971517
	Altitude (m)	1691
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,729
1-2	Category urban/rural	Rural
1-3	Satellite villages	3 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (85%), Argoba (14%), Amhara (1%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	なし
1-8	Distance from paved road (km)	82
1-9	Rate of power failure (%)	13%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
		,,
2-1(2)	Operation time	7days/week-11hrs/day (rainy season), 7days/week-11hrs/day (dry
		season)
2-2	Pump	
2-2(1)	Туре	submersible pump
2-2(2)	Manufacturer	no data
2-2(3)	Model, specification	no data
2-2 (4)	Output (kW)	11 kW, 400V
	Output (kW)	11 kW, 400V
2-2 (4)	Cycle (Hz), speed (rpm)	11 kW, 400V 50Hz, 2890rpm
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	50Hz, 2890rpm 170
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz, 2890rpm
2-2 (5) 2-2 (6) 2-2 (7)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)	50Hz, 2890rpm 170
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	50Hz, 2890rpm 170 12 yeas since 2002
2-2 (5) 2-2 (6) 2-2 (7)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)	50Hz, 2890rpm 170 12 yeas since 2002
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes	50Hz, 2890rpm 170 12 yeas since 2002 2"
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	50Hz, 2890rpm 170 12 yeas since 2002 2"
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	50Hz, 2890rpm 170 12 yeas since 2002 2" no data not installed
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	50Hz, 2890rpm 170 12 yeas since 2002 2"
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	50Hz, 2890rpm 170 12 yeas since 2002 2" no data not installed
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type	50Hz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	SOHz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KVA)	50Hz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator VM SUN3105 30 kVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	50Hz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator VM SUN3105
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	50Hz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator VM SUN3105 30 kVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes	50Hz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator VM SUN3105 30 kVA 12 years since 2002
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(3) 2-3(5)	Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	50Hz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator VM SUN3105 30 kVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 (2) 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	50Hz, 2890rpm 170 12 yeas since 2002 2* no data not installed diesel generator VM SUN3105 30 kVA 12 years since 2002 2002, Oromia Regional Government
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 (2) 2-3 (2) 2-3 (2) 2-3 (3) 2-3 (2) 2-3 (4) 2-4 (1) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	SOHz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator VM SUN3105 30 kVA 12 years since 2002 2002, Oromia Regional Government 99.7m, steel
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	SoHz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator VM SUN3105 30 kVA 12 years since 2002 2002, Oromia Regional Government 99.7m, steel 99.7m, 200mm
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of soreen Depth, diameter and material of screen	SOHz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator VM SUN3105 30 kVA 12 years since 2002 2002, Oromia Regional Government 99.7m, steel
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen Aquifer	50Hz, 2890rpm 170 12 yeas since 2002 2" no data not installed diesel generator VM SUN3105 30 kVA 12 years since 2002 2002, Oromia Regional Government 99.7m, steel 99.7m, steel 99.7m, 200mm no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(4) 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of soreen Depth, diameter and material of screen	50Hz, 2890rpm 170 12 yeas since 2002 2* no data not installed diesel generator VM SUN3105 30 kVA 12 years since 2002 2002, Oromia Regional Government 99.7m, steel 99.7m, 200mm no data no data no data

Small Town Profiles (59/90)

Small Town Profiles (60/90)

2-4(8)	Pumping rate and draw down (actual)	16.7 m³/hr, no data
2-4 (9)	Position of pump (depth)	83 m
2-5	Transmission / distribution facilities	C) II
2-5 (1)	Dia., length and material of transmission pipe	50mm-GSP
2-5 (2)	Specification of distribution reservoir	50m³
2-5 (3)	Dia., length and material of distribution pipe	40mm-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	3
2-5 (4)-2	Private connections (set)	139
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3		an instance (an functioning)
	Operation and maintenance system	
3-1	Organization	
3-1(1)	Type	water committee
3-1 (2)	Year of establishment	2002 Tahir Mohamed, Chairman, 0913-185947
3-1 (3)	Contact person	Tahir Mohamed, Chairman, 0915-18594/
3-2	Staffs	
3-2(1)	Number of staffs	11
3-2(2)	Experience of operator (year)	4 years
3-2 (3)	Operator's experience of training	no
3-3	Water tariff	
3-3 (1)	Water tariff	18 birr/m³ for public taps and 21 birr/m³ for private connection
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	21.2
3-4	Remaining funds	
3-4 (1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	May 2005, CBE Gelemso branch and Oromia Credit & Saving Bank Cheleleka branch, Chorora Town Water Committee
3-4 (3)	Amount of remaining funds	yes, 36,500 birr (bank) and 4,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office through Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	20 birr/m³
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	0.54
5-2 (2)	Total hardness (mg/L)	272
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	7.8
6-2	Sufficiency rate of safe water (%)	21.7
7	Any other water supply projects	None



## Legend

Small Town Profiles (61/90)

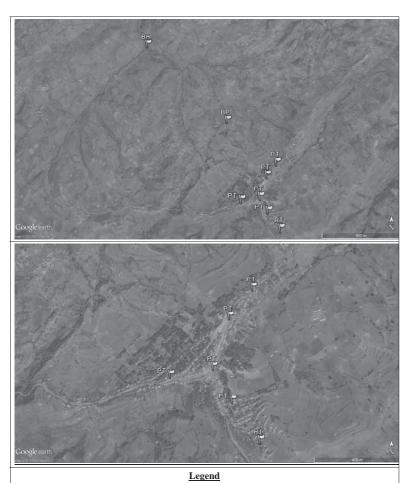
Small Town Profiles (62/90)

## Small Town Profile (WH-2)

-	ID	WH-2
	Administrative	
	Town	Bedeyi
	Woreda	Anchar
	Zone	West Hararge
	Region	Oromia
	Coordinate	OTOTIME .
	UTM-E(Adindan)	627376
-		
	UTM-N (Adindan)	954910
	Altitude (m)	2149
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,945
1-2	Category urban/rural	Urban
1-3	Satellite villages	4 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (70%), Amhara (25%), Argoba (5%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	73
1-9	Rate of power failure (%)	Unelectrified
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
(-)		
2-1(2)	Operation time	7 days/week-9 hrs/day (rainy season), 7 days/week-9 hrs/day (dry season)
2-1(2)	Operation time	/ days/week-9 lits/day (falliy seasoff), / days/week-9 lits/day (dry seasoff)
2-2	Pump	
2-2(1)	Туре	submersible pump (borehole), turbine pump (booster PS)
2-2(2)	Manufacturer	CMS (borehole) and KSB (booster)
2-2(3)	Model, specification	QB 25 (borehole) and 20619146/10 (booster PS)
2-2 (4)	Output (kW)	18.5 kW/ 22 kW, 400V
(.)		
2-2 (5)	Cuala (Ha) amond (man)	50Hz, 2890rpm
	Cycle (Hz), speed (rpm)	
2-2 (6)	Total head (m)	no data
2-2 (6)	Total head (m)  Period of usage (installation month/ year)	
		no data
2-2 (7)	Period of usage (installation month/ year)	no data
		no data 7 years since 1995
2-2 (7)	Period of usage (installation month/ year)  Diameter/ material of riser pipes	no data 7 years since 1995 65mm/ no data
2-2 (7) 2-2 (8) 2-2 (9)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes	no data 7 years since 1995 65mm/ no data no data (both)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	no data 7 years since 1995 65mm/ no data
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source	no data 7 years since 1995 65mm/ no data no data (both) installed and working (2)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	no data 7 years since 1995 65mm/ no data no data (both)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type	no data 7 years since 1995 65mm/ no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer	no data 7 years since 1995 65mm/ no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60ID (booster PS)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer	no data 7 years since 1995 65mm/ no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60ID (booster PS)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification  Output (KVA)	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60JD (booster PS) 60 kWA (both)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification  Output (kVA) Period of usage (installation month/ year)	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60JD (booster PS) 60 kWA (both)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes	no data 7 years since 1995 65mm/ no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60JD (booster PS) 60 kVA (both) 7 years since 2007 (both)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification  Output (kVA) Period of usage (installation month/ year)	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60JD (booster PS) 60 kWA (both)
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60JD (booster PS) 60 kVA (both) 7 years since 2007 (both)  May 2007, Oromia Regional Government
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification Output (KvA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60JD (booster PS) 60 kVA (both) 7 years since 2007 (both)  May 2007, Oromia Regional Government 87.65m, steel
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth and diameter of pumping chamber	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60JD (booster PS) 60 kVA (both) 7 years since 2007 (both)  May 2007, Oromia Regional Government 87.65m, steel 87.65m, steel
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60/D (booster PS) 60 kVA (both) 7 years since 2007 (both)  May 2007, Oromia Regional Government 87.65m, steel 87.65m, 6° no data
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth diameter of pumping chamber  Depth, diameter and material of screen  Aquifer	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60JD (booster PS) 60 kVA (both) 7 years since 2007 (both)  May 2007, Oromia Regional Government 87.65m, steel 87.65m, 6° no data no data
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60/D (booster PS) 60 kVA (both) 7 years since 2007 (both)  May 2007, Oromia Regional Government 87.65m, steel 87.65m, 6° no data
2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth diameter of pumping chamber  Depth, diameter and material of screen  Aquifer	no data 7 years since 1995 65mm' no data no data (both) installed and working (2) 2 diesel generators (1 for borehole, 1 for booster pumping station) Perkins (borehole), John Deere (booster PS) 1103A-337 (borehole) and 60JD (booster PS) 60 kVA (both) 7 years since 2007 (both)  May 2007, Oromia Regional Government 87.65m, steel 87.65m, 6° no data no data

2-4 (8)	Pumping rate and draw down (actual)	8.3 m³/hr, no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5(1)	Dia., length and material of transmission pipe	100mm, GSP
1		75mm, GSP
		,
2-5 (2)	Specification of distribution reservoir	50 m³ and 25m³ (booster PS)
2-3 (2)	Specification of distribution reservoir	50 m² and 25m (booster PS)
2-5 (3)	Dia., length and material of distribution pipe	80mm-GSP, 75mm-GSP, 65mm-GSP, 50mm-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	5
2-5 (4)-2	Private connections (set)	101
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	an instance (an functioning)
3-1	Organization	
3-1 (1)	Туре	water committee
3-1 (2)	Year of establishment	May 2007
3-1 (3)	Contact person	Abebe Aytenfisu, Chairman, 0932-406431
3-2	Staffs	
3-2(1)	Number of staffs	16
3-2(2)	Experience of operator (year)	2 operators with 7 years and 2 months experience
3-2 (3)	Operator's experience of training	3-4 days on the job training at Woreda Office
,		,
3-3	Water tariff	
3-3 (1)	Water tariff	38 birr/m <sup>3</sup> for public taps and 42 birr/m <sup>3</sup> for private connections
33(1)	Water tarm	38 bin/m for public taps and 42 bin/m for private connections
3-3(2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m3/day)	16.8
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	cash in the village
3-4(2)	Name of financial institutions	not applicable
. (=)		
3-4 (3)	Amount of remaining funds	no, 10,000 birr (cash)
3-4 (3)	Amount of fentalining funds	110, 10,000 biii (casii)
3-5	D J	
3-5 (1)	Procedure of repairing works	
3-3 (1)	How to provide the fund for repair	remaining fund and temporary collection
2.5 (2)	To only on a late or a circ	Designative of the second of t
3-5 (2)	To whom ask to repair	Regional WME bureau via Zonal WME office via Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	20,000 - 25,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	42 birr/m³ (in case of generator) or 8 birr/m³ (in case of public power
1		supply)
4-5	Intension to pay for equipment replacement	no, difficult to pay for pumps and generators
1	cost	no, anneat to pay for pumps and generators
c		
5 1	Groundwater development potential	5- 10
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	0.50
	Total hardness (mg/L)	354
5-2(2)		
6	Difficulty to access to safe water	
6 6-1	Difficulty to access to safe water Safe water supply volume (L/c/d)	5.7
6	Difficulty to access to safe water	5.7 9.2
6 6-1	Difficulty to access to safe water Safe water supply volume (L/c/d)	

Small Town Profiles (63/90)
Small Town Profiles (64/90)



BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (WH-3)

	Silian	Town Profile (WH-3)
	ID	WH-3
	Administrative	
	Town	Hardim
	Woreda	Guba Qoricha
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	656277
	UTM-N (Adindan)	975905
	Altitude (m)	1632
No.	Item	1032
1	Population etc.	
1-1	Population etc. Population (2014)	5,905
1-2	Category urban/rural	Urban
1-3	Satellite villages	2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (80%), Amhara (20%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	4-C
1-8	Distance from paved road (km)	51
1-9	Rate of power failure (%)	20%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
l ` ′		,
2-1(2)	Operation time	7 days/week-10 hrs/day (rainy season), 7 days/week-10 hrs/day (dry
(-)		season)
		Journ's
2-2	Pump	
2-2(1)	Type	submersible pump
2-2 (1)		
	Manufacturer	Pleuger no data
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	14.5 kW, 400V
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz, 2890rpm
2-2(6)	Total head (m)	170m
2-2 (7)		
	Period of usage (installation month/ year)	19 years since 1995
2.2	Period of usage (installation month/ year)	19 years since 1995
12-2 (8)		
2-2 (8)	Period of usage (installation month/ year)  Diameter/ material of riser pipes	19 years since 1995 65mm/ CSP
	Diameter/ material of riser pipes	65mm/ CSP
2-2 (9)	Diameter/ material of riser pipes  Unit length/total number of riser pipes	65mm/ CSP 65m, 12pieces
2-2 (9) 2-2 (10)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	65mm/ CSP
2-2 (9) 2-2 (10) 2-3	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	65mm/ CSP  6m, 12pieces installed (not functioning)
2-2 (9) 2-2 (10)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	65mm/ CSP 65m, 12pieces
2-2 (9) 2-2 (10) 2-3 2-3(1)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type	65mm/ CSP 6m, 12pieces installed (not functioning) diesel generator
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz F41.912
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA)	65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz F41.912 38 kVA
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz F41.912
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz F41.912 38 kVA
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA)	65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz F41.912 38 kVA
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz F41.912 38 kVA
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes	65mm/ CSP 6m, 12pieces installed (not functioning) diesel generator  Deutz F41-912 38 kVA 2 years since 2012 (second hand)
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes	65mm/ CSP 6m, 12pieces installed (not functioning) diesel generator  Deutz F41-912 38 kVA 2 years since 2012 (second hand)
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	65mm/ CSP 6m, 12pieces installed (not functioning) diesel generator Deutz F4L912 38 kVA 2 years since 2012 (second hand)
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz F41-912 38 kVA 2 years since 2012 (second hand)  1994, Oromia Regional Government  78m, steel 78m, 200mm
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz  F4L912  38 kVA  2 years since 2012 (second hand)  1994, Oromia Regional Government  78m, 200mm  no data
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (2) 2-4 (4) 2-4 (5)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth diameter of pumping chamber Depth, diameter and material of screen Aquifer	65mm/ GSP  65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz F41-912  38 kVA 2 years since 2012 (second hand)  1994, Oromia Regional Government  78m, steel 78m, 200mm no data no data
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	65mm/ CSP  6m, 12pieces installed (not functioning)  diesel generator  Deutz  F4L912  38 kVA  2 years since 2012 (second hand)  1994, Oromia Regional Government  78m, 200mm  no data

Small Town Profiles (65/90)

Small Town Profiles (66/90)

2-4(8)	Pumping rate and draw down (actual)	8.3 m³/hr
2-4 (9)	Position of pump (depth)	72 m
2-5	Transmission / distribution facilities	7211
2-5 (1)	Dia., length and material of transmission pipe	75mm-GSP
2-5 (2)	Specification of distribution reservoir	25m³
2-5 (3)	Dia., length and material of distribution pipe	75mm-GSP, 50mm-GSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	7
2-5 (4)-2	Private connections (set)	88
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1(1)	Туре	water committee
3-1 (2)	Year of establishment	1995
3-1 (3)	Contact person	Husein Ahmed, Chairman, 0924-169999
3-2	Staffs	
3-2(1)	Number of staffs	13
3-2(2)	Experience of operator (year)	19 years
3-2 (3)	Operator's experience of training	10.5 month at Zonal WME office
3-3	Water tariff	
3-3 (1)	Water tariff	19 birr/m3 for public taps and 25 birr/m3 for private connection
3-3 (2)	Collection rate (%)	100%
3-3(3)	The amount of the water used (m3/day)	18.1
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	May 1997, CBE Gelemso branch
3-4 (3)	Amount of remaining funds	yes, 10,000 birr (bank) and 15,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office through Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate  Intension to participate	yes
4-2	Maximum amount pay for construction	100,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	19-25 birr/m³ (in case of generator) or 5-6 birr/m³ (in case of public power supply by EEPCO is available)
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	0.71
5-2 (1)	Total hardness (mg/L)	400
6	Difficulty to access to safe water	100
6-1	Safe water supply volume (L/c/d)	3.1
		5.1
6-2 7	Sufficiency rate of safe water (%)	
/	Any other water supply projects	None



## Legend

Small Town Profiles (67/90)

Small Town Profiles (68/90)

## Small Town Profile (WH-4)

	ID	WH-4
$\vdash$		W II-4
	Administrative	n.t
-	Town	Bube
	Woreda	Guba Qoricha
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	662813
	UTM-N (Adindan)	979936
	Altitude (m)	1991
No.	Item	
1	Population etc.	
1-1	Population (2014)	6,246
1-2	Category urban/rural	Rural
1-3	Satellite villages	2 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (90%), Amhara (7%), Somali (3%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	26
1-9	Rate of power failure (%)	Unelectrified
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized spring (1)
2 1(1)	intuic iteliaco	instollate spring (1)
2-1(2)	Operation time	2.3 days/week-4 hrs/day (rainy season) , 1.8 days/week-4 hrs/day (dry
2-1(2)	Operation time	season)
		season)
	-	
2-2	Pump	
2-2(1)	Туре	submersible pump
2-2(2)	Manufacturer	no data
2-2(3)	Model, specification	no data
2.2 (4)	-	
2-2(4)	Output (kW)	18.5 kW, 400V
2-2 (4)	Output (kW)	18.5 kW, 400V
	• , ,	·
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	50Hz no data
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz
2-2 (5) 2-2 (6) 2-2 (7)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)	50Hz no data 4 years since 2010
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	50Hz no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes	50Hz no data 4 years since 2010
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	50Hz no data 4 years since 2010 2"/4" no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes	50Hz no data 4 years since 2010 2"/4"
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	50Hz no data 4 years since 2010 2"/4" no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	50Hz no data 4 years since 2010  2"/4" no data not installed
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	50Hz no data 4 years since 2010 2"/4" no data
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type	S0Hz no data 4 years since 2010  2"/4" no data not installed diesel generator
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	50Hz no data 4 years since 2010  2"/4" no data not installed diesel generator  Perkins
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	50Hz no data 4 years since 2010  2"/4"  no data not installed  diesel generator  Perkins 23201500
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA)	S0Hz no data 4 years since 2010  2"/4" no data not installed diesel generator  Perkins 2320/1500 40 KVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	50Hz no data 4 years since 2010  2"/4"  no data not installed  diesel generator  Perkins 23201500
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	S0Hz no data 4 years since 2010  2"/4" no data not installed diesel generator  Perkins 2320/1500 40 KVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes	S0Hz no data 4 years since 2010  2"/4" no data not installed diesel generator  Perkins 2320/1500 40 KVA 4 years since 2010
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	S0Hz no data 4 years since 2010  2"/4" no data not installed diesel generator  Perkins 2320/1500 40 KVA
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	50Hz no data 4 years since 2010  2"/ 4"  no data not installed  diesel generator  Perkins 2320/1500 40 kVA 4 years since 2010  2006, Zonal Water Mineral & Energy Office of West Hararge
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	S0Hz no data 4 years since 2010  2"/4" no data not installed diesel generator  Perkins 2320/1500 40 KVA 4 years since 2010
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	50Hz no data 4 years since 2010  2"/ 4"  no data not installed  diesel generator  Perkins 2320/1500 40 kVA 4 years since 2010  2006, Zonal Water Mineral & Energy Office of West Hararge
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	50Hz no data 4 years since 2010  2*/ 4* no data not installed diesel generator  Perkins 2330 1500 40 kVA 4 years since 2010  2006, Zonal Water Mineral & Energy Office of West Hararge not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 (2) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4 (1) 2-4 (2) 2-4 (2) 2-4 (3) 2-4 (3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	SOHZ no data 4 years since 2010  2"/ 4" no data not installed diesel generator  Perkins 2320/1500  40 kVA 4 years since 2010  2006, Zonal Water Mineral & Energy Office of West Hararge not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen Aquifer	50Hz no data 4 years since 2010  2"/4" no data not installed diesel generator  Perkins 2320 1500 40 kVA 4 years since 2010  2006, Zonal Water Mineral & Energy Office of West Hararge not applicable not applicable not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 (2) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4 (1) 2-4 (2) 2-4 (2) 2-4 (3) 2-4 (3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	SOHZ no data 4 years since 2010  2"/ 4" no data not installed diesel generator  Perkins 2320/1500  40 kVA 4 years since 2010  2006, Zonal Water Mineral & Energy Office of West Hararge not applicable not applicable not applicable not applicable

2-4 (8)	Pumping rate and draw down (actual)	no data
2-4 (9)	Position of pump (depth)	no data
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	50mm-GSP
2-5 (2)	Specification of distribution reservoir	50m³
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	4
2-5 (4)-2	Private connections (set)	16
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	g/
3-1	Organization	
3-1 (1)	Туре	water committee
3-1 (2)	Year of establishment	2006
3-1 (3)	Contact person	Ahmedsani Abrahim, Chairman, 0919-215340
3-2	Staffs	
3-2(1)	Number of staffs	10
3-2(2)	Experience of operator (year)	8 years
3-2 (3)	Operator's experience of training	no
3-3	Water tariff	
3-3 (1)	Water tariff	20 birr/m <sup>3</sup> for public taps and 21 birr/m <sup>3</sup> for private connections
3-3 (2)	Collection rate (%)	100% only for public taps
3-3 (3)	The amount of the water used (m³/day)	18.1
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4(2)	Name of financial institutions	2013, CBE Gelenso branch, Bube Town Water Committee
3-4 (3)	Amount of remaining funds	yes, 15,000 birr (bank) and unknown (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office through Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	5% of the project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	20-21 birr/m³ (in case of generator) or 8 birr/m³ (in case of public power supply by EEPCO will be available)
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	0~5
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	2.9
6-2	Sufficiency rate of safe water (%)	8.4
7	Any other water supply projects	None

Small Town Profiles (69/90)

Small Town Profiles (70/90)





## Legend

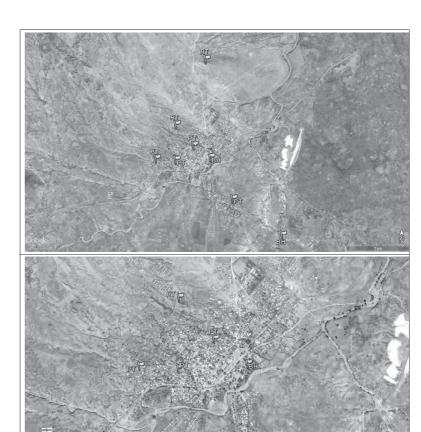
BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (WH-5)

	ID	WH-5
	Administrative	WIFS
	Town	Mieso
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	Oronia
	UTM-E (Adindan)	692799
	UTM-N (Adindan)	1021080
	Altitude (m)	1323
No.	Item	1323
NO.		
1	Population etc.	17 (72
1-1	Population (2014)	17,672
1-2	Category urban/rural	Urban
1-3	Satellite villages	6 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (60%), Amhara (20%), Somali (10%), Others (10%)
1-6	Main occupation	Daily worker
1-7	Grade of the town	4-A
1-8	Distance from paved road (km)	0
1-9	Rate of power failure (%)	5%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (2)
2-1(2)	Operation time	7 days/week-24 hrs/day (rainy season), 7 days/week-24 hrs/day) (dry
	•	season)
		, '
2-2	Pump	
2-2(1)	Type	submersible pump (2)
2-2 (2)	Manufacturer	Grundfoss (BH1), CMS (BH2)
2-2 (3)	Model, specification	AF11-1A (BH-1)
(-)	,	CMSE-10909 (BH-2)
		` ´
2-2 (4)	Output (kW)	11kW-380V (BH-1)
1	* ` '	22kW-400V (BH-2)
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz (both)
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	
2-2 (1)		6 years aim as Marsh 2009 (BHI) 2 years aim as 2012 (BH2)
	renot or usage (instantion instant year)	6 years since March 2008 (BH1), 2 years since 2012 (BH2)
2-2 (8)		
2-2 (8)	Diameter/ material of riser pipes	6 years since March 2008 (BH1), 2 years since 2012 (BH2)  50mm-CSP (BH-1), 100mm-CSP (BH-2)
	Diameter/ material of riser pipes	50mm-CSP (BH-1), 100mm-CSP (BH-2)
2-2 (9)	Diameter/ material of riser pipes  Unit length/total number of riser pipes	50mm-CSP (BH-1), 100mm-CSP (BH-2) no data (BH1), 6m-11.5pieces (BH2)
2-2 (9) 2-2 (10)	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter	50mm-CSP (BH-1), 100mm-CSP (BH-2)
2-2 (9) 2-2 (10) 2-3	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	50mm-GSP (BH-1), 100mm-GSP (BH-2) no data (BH1), 6m-11.5pieces (BH2) installed and working (2)
2-2 (9) 2-2 (10)	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter	50nm-GSP (BH-1), 100nm-GSP (BH-2)  no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel
2-2 (9) 2-2 (10) 2-3 2-3(1)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type	50mm-GSP (BH-1), 100mm-GSP (BH-2) no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2)
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	50mm-GSP (BH-1), 100mm-GSP (BH-2)  no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2)  FPT (BH2)
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification	50mm-GSP (BH-1), 100mm-GSP (BH-2)  no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2) FFT (BH2) F4GE0455A-F650
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA)	50mm-CSP (BH-1), 100mm-CSP (BH-2)  no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2) FPT (BH2) F4GE0455A-F650 70 kVA
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification	50mm-GSP (BH-1), 100mm-GSP (BH-2)  no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2) FFT (BH2) F4GE0455A-F650
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA)	50mm-CSP (BH-1), 100mm-CSP (BH-2)  no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2) FPT (BH2) F4GE0455A-F650 70 kVA
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	50mm-CSP (BH-1), 100mm-CSP (BH-2)  no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2) FPT (BH2) F4GE0455A-F650 70 kVA
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes	50mm-GSP (BH-1), 100mm-GSP (BH-2) no data (BH1), 6m-11.5pieces (BH2) installed and working (2) public power supply (BH1), public power supply (standby diesel generator) (BH2) FPT (BH2) F4GE0455A-F650 70 kVA 2 years since 2012
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes	50mm-GSP (BH-1), 100mm-GSP (BH-2) no data (BH1), 6m-11. Spieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2) FFT (BH2) FFGBM55A-F650 70 kVA 2 years since 2012  1977-Government (BH1), 2001-China (BH2)  94m-steel (BH1) and 120m-steel (BH2)
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds	50nm-GSP (BH-1), 100nm-GSP (BH-2)  no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2) FFT (BH2) F4GE0455A-F650 70 kVA 2 years since 2012
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	50mm-GSP (BH-1), 100mm-GSP (BH-2) no data (BH1), 6m-11. Spieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2) FFT (BH2) FFGBM55A-F650 70 kVA 2 years since 2012  1977-Government (BH1), 2001-China (BH2)  94m-steel (BH1) and 120m-steel (BH2)
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	50mm-GSP (BH-1), 100mm-GSP (BH-2)  no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2) FPT (BH2) F4GE0455A-F650 70 kVA 2 years since 2012  1977-Government (BH1), 2001-China (BH2)  94m-steel (BH1) and 120m-steel (BH2) 94m-steel (BH1), 120m-10° (BH-2)
2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	50nm-GSP (BH-1), 100nm-GSP (BH-2)  no data (BH1), 6m-11.5pieces (BH2) installed and working (2)  public power supply (BH1), public power supply (standby diesel generator) (BH2) FFT (BH2) F4GE0455A-F650 70 kVA 2 years since 2012  1977-Government (BH1), 2001-China (BH2)  94m-Steel (BH1) and 120m-steel (BH2) 94m-Steel (BH1), 120m-10" (BH-2) no data

Small Town Profiles (71/90)
Small Town Profiles (72/90)

2-4(8)	Pumping rate and draw down (actual)	8.3 m³/hr - no data (BH1), 19-20 m³/hr - no data (BH2)
2-4 (9)	Position of pump (depth)	no data (BH1)/ 69m (BH2)
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	65mm, no data, CSP (BH1), 75mm, no data, CSP (BH-2)
2-5 (2)	Specification of distribution reservoir	70m³ (1977), 50m³ (2001)
2-5 (3)	Dia., length and material of distribution pipe	no data
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	10
2-5 (4)-2	Private connections (set)	712
2-5 (4)-3	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1(1)	Туре	Mieso Town Water Supply Service Office
3-1(2)	Year of establishment	2005
3-1 (3)	Contact person	Almaz Mekonnen, Manager, 0913-997881
3-2	Staffs	
3-2(1)	Number of staffs	11
3-2(2)	Experience of operator (year)	10 years both 2 operators
3-2 (3)	Operator's experience of training	no (both)
3-3	Water tariff	
3-3(1)	Water tariff	7.5 birr/m³ for public taps and 6.0 birr/m³ for private connection plus 2 birr.
		month/ connection as water meter rental fee
3-3 (2)	Collection rate (%)	72%
3-3 (3)	The amount of the water used (m³/day)	224.8
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	June 2005, CBE Mieso branch, Mieso Town Water Supply Service Office
3-4 (3)	Amount of remaining funds	yes, 314,586.24 birr (bank) and 2,000 birr (cash))
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	Zonal WME office through Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	50,000 birr
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	10 birr/m³
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	5~10
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	0.69
5-2 (2)	Total hardness (mg/L)	210
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	12.7
6-2	Sufficiency rate of safe water (%)	21.1
7	Any other water supply projects	On going (One Wash Program)



## Legend

Small Town Profiles (73/90)

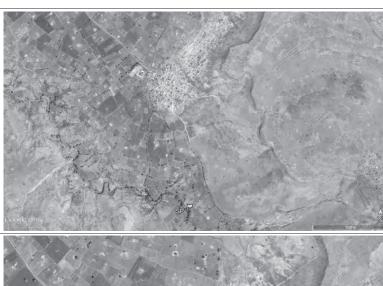
Small Town Profiles (74/90)

#### Small Town Profile (WH-6)

	ID.	WWY C
	ID	WH-6
	Administrative	
	Town	Hargeti
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	674221
	UTM-N (Adindan)	1003489
	Altitude (m)	1349
No.	Item	
1	Population etc.	
1-1	Population (2014)	3,365
1-2	Category urban/rural	Rural
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (100 %)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	14
1-9	Rate of power failure (%)	Unelectrified
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	no facility, surface water (Arba river)
2-1(2)	Operation time	not applicable
2-2	Pump	
2-2(1)	Туре	not applicable
2-2 (1)	Manufacturer	not applicable
2-2 (2)	Model, specification	not applicable
2-2 (3)	Model, specification	постарывания
2-2 (4)	Output (kW)	not applicable
2-2(5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (6)	Total head (m)	not applicable
2-2 (7)	Period of usage (installation month/ year)	not applicable
2-2 (8)		
	Diameter/ material of riser pipes	not applicable
2-2 (9)	Unit length/total number of riser pipes	not applicable
2-2 (10)	Existence of water flow meter	not applicable
2-3	Power source	
2-3(1)	Туре	not applicable
2-3(2)	Manufacturer	not applicable
2-3(3)	Model, specification	not applicable
10.2745		
2-3(4)	Output (kVA)	not applicable
2-3(4)		
	Output (kVA)	not applicable
2-3(5)	Output (kVA) Period of usage (installation month/ year)	not applicable
2-3(5) 2-4 2-4 (1)	Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds	not applicable not applicable not applicable
2-3(5) 2-4 2-4 (1) 2-4 (2)	Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	not applicable not applicable not applicable not applicable
2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3)	Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	not applicable not applicable not applicable not applicable not applicable not applicable
2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	not applicable
2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (5)	Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen Aquifer	not applicable
2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen	not applicable

2-4 (8)	Pumping rate and draw down (actual)	not applicable
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	••
2-5 (1)	Dia., length and material of transmission pipe	not applicable
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	not applicable
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	not applicable
2-5 (4)-2	Private connections (set)	not applicable
2-5 (4)-3	Cattle troughs (set)	not applicable
2-5 (5)	Existence of water meter	not applicable
3	Operation and maintenance system	пот аррисаок
3-1		
3-1 (1)	Organization Type	not applicable
3-1 (1)	Year of establishment	not applicable
3-1 (3)	Contact person	not applicable
3-2	Staffs	
3-2 (1)	Number of staffs	0
3-2 (1)	Experience of operator (year)	not applicable
3-2 (2)	Operator's experience of training	not applicable
3-2 (3)	operator's experience of training	not applicable
3-3	Water tariff	
3-3(1)	Water tariff	not applicable
2.2.(2)		
3-3 (2)	Collection rate (%)	not applicable
3-3 (3)	The amount of the water used (m³/day)	0.0
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	not applicable
3-4 (2)	Name of financial institutions	not applicable
3-4 (3)	Amount of remaining funds	not applicable
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	not applicable
3-5 (2)	To whom ask to repair	not applicable
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	no idea
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	no idea
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2(2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	0.0
6-2	Sufficiency rate of safe water (%)	0
7	Any other water supply projects	None

Small Town Profiles (75/90)
Small Town Profiles (76/90)





## Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (WH-7)

	ID	WH-7
	Administrative	
	Town	Bordede
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	652603
	UTM-N (Adindan)	996461
	Altitude (m)	1100
NT.		1100
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,940
1-2	Category urban/rural	Urban
1-3	Satellite villages	4 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (97%), Other (3%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	4-B
1-8	Distance from paved road (km)	2
1-9	Rate of power failure (%)	9%
2	Existing water supply facilities	
2-1	Intake facilities	1
2-1(1)	Intake facilities	motorized borehole (1)
2-1(1)	intake facilities	indicized boteliole (1)
2-1(2)	Operation time	7 days/week-10 hrs/day (rainy season), 7 days/week-11 hrs/day (dry season)
2-2	Pump	
2-2(1)	Type	submersible pump
2-2 (2)	Manufacturer	Flankline
2-2 (3)	Model, specification	no data
2-2 (3)	woder, specification	no data
2-2 (4)	Output (kW)	15 kW
2-2 (5)		
	Cycle (Hz), speed (rpm)	50Hz, 2860rpm
	Cycle (Hz), speed (rpm) Total head (m)	
2-2 (6)	Total head (m)	225m @ 30m³/hr
2-2 (6) 2-2 (7)	Total head (m)  Period of usage (installation month/ year)	225m @ 30m <sup>3</sup> /hr 9 month since June 2013
2-2 (6) 2-2 (7) 2-2 (8)	Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes	225m @ 30m³/hr 9 month since June 2013 2"/ GSP
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	225m @ 30m³/hr 9 month since June 2013 2"/ GSP no data
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	225m @ 30m³/hr 9 month since June 2013 2"/ GSP
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes	225m @ 30m³/hr 9 month since June 2013 2"/ GSP no data
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	225m @ 30m³/hr 9 month since June 2013 2"/ GSP no data
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	225m @ 30m³/hr 9 month since June 2013  2"/ GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	225m @ 30m³ /hr 9 month since June 2013  2"/ GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	225m @ 30m³/hr  9 month since June 2013  2"/ GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)  IVECO  F4GE94552*F600
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	225m @ 30m³ /hr 9 month since June 2013  2"/ GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)  IVECO
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	225m @ 30m³ /hr 9 month since June 2013  2" / GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)  IVECO  F4GE0455C*F600  60 kVA
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA)	225m @ 30m³ /hr 9 month since June 2013  2" / GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)  IVECO  F4GE0455C*F600  60 kVA
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	225m @ 30m³ /hr 9 month since June 2013  2"/ GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)  IVECO F4GE0455C*F600 60 kVA 5 years since 2009
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kWA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	225m @ 30m³ /hr 9 month since June 2013  2" / GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)  IVECO F4GE0455C*F600  60 kVA 5 years since 2009
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(3) 2-3(4) 2-4 (1) 2-4 (2) 2-4 (2)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	225m @ 30m³ /hr 9 month since June 2013  2"/ GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)  IVECO F4GE30455C**F600  60 kVA 5 years since 2009  1976/ Government  130m, steel 130m, 200mm
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	225m @ 30m³ /hr 9 month since June 2013  2"/ GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)  IVECO F4GE045SC*F600 60 kVA 5 years since 2009  1976' Government 130m, steel 130m, 200mm no data
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (5)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter of pumping chamber Depth, diameter and material of screen Aquifer	225m @ 30m³ /hr 9 month since June 2013  2" / GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)  IVECO F4GE0455C*F600  60 kVA  5 years since 2009  1976 / Government  130m, steel 130m, 200mm no data no data
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth, diameter and material of screen	225m @ 30m³ /hr 9 month since June 2013  2"/ GSP  no data installed and working  diesel generator (quality of public power supply is very poor so that pumps were burned 3 times)  IVECO F4GE045SC*F600 60 kVA 5 years since 2009  1976' Government 130m, steel 130m, 200mm no data

Small Town Profiles (77/90)

Small Town Profiles (78/90)

2-4(8)	Pumping rate and draw down (actual)	8 m³/hr
2-4 (9)	Position of pump (depth)	120m
2-4 (9)	Transmission / distribution facilities	12011
2-5 (1)	Dia., length and material of transmission pipe	no data, 65mm, GSP
23(1)	part and material of dampingston pape	
2-5 (2)	Specification of distribution reservoir	$50\mathrm{m}^3$
2-5 (3)	Dia., length and material of distribution pipe	100mm-GSP, 75mm-GSP, 65mm-GSP, 50mm-GSP, 25mm-GSP
2-3 (3)	Dia., engin and naterial of distribution pipe	Toolaired Collaired Collaired Collaired Collaired
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	9
2-5 (4)-2	Private connections (set)	168
2-5 (4)-3		0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1(1)	Туре	water committee
3-1 (2)	Year of establishment	2005
3-1 (3)	Contact person	Mohamed Yuya, Chairman, 0920-932333
3-2	Staffs	
3-2(1)	Number of staffs	14
3-2(2)	Experience of operator (year)	8 years
3-2(3)	Operator's experience of training	1 month and 5 days by IRC in 2004
3-3	Water tariff	
3-3(1)	Water tariff	20 birr/m <sup>3</sup> (6 birr/m <sup>3</sup> when using public power supply in the past)
		(
3-3 (2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	60.6
3-4	Remaining funds	
-	Where to keep remaining funds	bank
3-4(1)		
3-4 (1)	Name of financial institutions	CBE Mieso Branch, Bordede Town Water Committee
3-4 (2)	Name of financial institutions  Amount of remaining funds	CBE Mieso Branch, Bordede Town Water Committee
3-4 (2)	Name of financial institutions	CBE Mieso Branch, Bordede Town Water Committee
3-4 (2) 3-4 (3) 3-5 3-5 (1)	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund
3-4 (2) 3-4 (3) 3-5	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whomask to repair	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)
3-4 (2) 3-4 (3) 3-5 3-5 (1) 3-5 (2)	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whom ask to repair  Intension to participate in new project	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office
3-4 (2) 3-4 (3) 3-5 3-5 (1) 3-5 (2)	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whomask to repair	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund
3-4 (2) 3-4 (3) 3-5 3-5 (1) 3-5 (2) 4 4-1	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whom ask to repair  Intension to participate in new project  Intension to participate	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes
3-4 (2) 3-4 (3) 3-5 3-5 (1) 3-5 (2) 4 4-1 4-2	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whomask to repair  Intension to participate in new project  Intension to participate  Maximum amount pay for construction	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes no idea
3-4 (2) 3-4 (3) 3-5 3-5 (1) 3-5 (2) 4-1 4-2 4-3	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whom ask to repair Intension to participate in new project Intension to participate  Maximum amount pay for construction Intension to establish O&M organization	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes no idea yes 20 birr/m³ (in case of generator) and 5-6 birr/m3 (in case of public power
3-4 (3) 3-5 (3) 3-5 (1) 3-5 (2) 4 4-1 4-2 4-3 4-4	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whomask to repair  Intension to participate in new project  Intension to participate  Maximum amount pay for construction  Intension to establish O&M organization  Set tariff per cubic meter  Intension to pay for equipment replacement	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes no idea yes 20 birr/m³ (in case of generator) and 5-6 birr/m³ (in case of public power supply)
3-4 (3) 3-5 (3) 3-5 (1) 3-5 (2) 4-1 4-2 4-3 4-4 4-5	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whomask to repair  Intension to participate in new project  Intension to participate e  Maximum amount pay for construction  Intension to establish O&M organization  Set tariff per cubic meter  Intension to pay for equipment replacement cost  Groundwater development potential	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes no idea yes 20 birr/m³ (in case of generator) and 5-6 birr/m³ (in case of public power supply)
3-4 (3) 3-5 (3) 3-5 (1) 3-5 (2) 4-1 4-2 4-3 4-4 4-5	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whom ask to repair Intension to participate in new project  Intension to participate  Maximum amount pay for construction Intension to establish O&M organization  Set tariff per cubic meter  Intension to pay for equipment replacement cost	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes no idea yes 20 birr/m³ (in case of generator) and 5-6 birr/m³ (in case of public power supply) no, difficult to pay for pumps and generators
3-4 (2) 3-4 (3) 3-5 3-5 (1) 3-5 (2) 4 4-1 4-2 4-3 4-4 5 5 5-1	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whom ask to repair  Intension to participate in new project  Intension to participate Maximum amount pay for construction  Intension to establish O&M organization  Set tariff per cubic meter  Intension to pay for equipment replacement  cost  Groundwater development potential  Water quantity potential (U/sec)	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes no idea yes 20 birr/m³ (in case of generator) and 5-6 birr/m³ (in case of public power supply) no, difficult to pay for pumps and generators
3-4 (2)  3-4 (3)  3-5  3-5 (1)  3-5 (2)  4  4-1  4-2  4-3  4-4  4-5  5  5  5-1  5-2  5-2 (1)	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whom ask to repair Intension to participate in new project Intension to participate in new project Maximum amount pay for construction Intension to establish O&M organization Set tariff per cubic meter  Intension to pay for equipment replacement cost Groundwater development potential Water quantity potential (L/sec) Water quality potential	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes no idea yes 20 birr/m³ (in case of generator) and 5-6 birr/m3 (in case of public power supply) no, difficult to pay for pumps and generators  5~10
3-4 (2)  3-4 (3)  3-5  3-5 (1)  3-5 (2)  4  4-1  4-2  4-3  4-4  4-5  5  5-1  5-2	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whomask to repair  Intension to participate in new project  Intension to participate e  Maximum amount pay for construction  Intension to establish O&M organization  Set tariff per cubic meter  Intension to pay for equipment replacement cost  Groundwater development potential  Water quantity potential (L/sec)  Water quality potential  Fluoride (mg/L)	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes no idea yes 20 birr/m³ (in case of generator) and 5-6 birr/m³ (in case of public power supply) no, difficult to pay for pumps and generators  5~10  0.84
3-4 (2)  3-4 (3)  3-5  3-5 (1)  3-5 (2)  4-1  4-2  4-3  4-4  4-5  5  5-1  5-2 (1)  5-2 (2)	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whom ask to repair Intension to participate in new project Intension to participate in new project Intension to stablish O&M organization Set tariff per cubic meter  Intension to pay for equipment replacement cost Groundwater development potential Water quantity potential (U/sec) Water quality potential Fluoride (mg/L) Total hardness (mg/L)	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes no idea yes 20 birr/m³ (in case of generator) and 5-6 birr/m³ (in case of public power supply) no, difficult to pay for pumps and generators  5~10  0.84
3-4 (2)  3-4 (3)  3-5  3-5 (1)  3-5 (2)  4-1  4-2  4-3  4-4  4-5  5  5-2 (1)  5-2 (2)  6	Name of financial institutions  Amount of remaining funds  Procedure of repairing works  How to provide the fund for repair  To whom ask to repair Intension to participate in new project Intension to participate of Maximum amount pay for construction Intension to establish O&M organization  Set tariff per cubic meter  Intension to pay for equipment replacement cost Groundwater development potential Water quantity potential  Water quantity potential Fluoride (mg/L) Total hardness (mg/L)  Difficulty to access to safe water	CBE Mieso Branch, Bordede Town Water Committee  yes, 50,000 birr (bank) and 5,000 birr (cash)  remaining fund  Zonal WME office through Woreda WME office  yes no idea yes. 20 birr/m³ (in case of generator) and 5-6 birr/m³ (in case of public power supply) no, difficult to pay for pumps and generators  5~10  0.84 290



## Legend

Small Town Profiles (79/90)

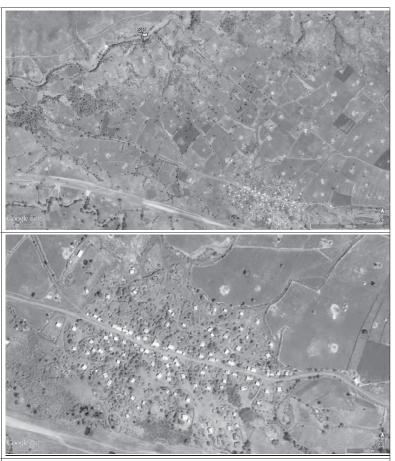
Small Town Profiles (80/90)

#### Small Town Profile (WH-8)

	ID	WH-8
	Administrative	
	Town	Kenteri
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	670893
	UTM-N (Adindan)	1005689
	Altitude (m)	1279
No.	Item	
1	Population etc.	
1-1	Population (2014)	1,752
1-2	Category urban/rural	Rural
1-3	Satellite villages	0
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (100 %)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	10
1-9	Rate of power failure (%)	25%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	no facility, surface water (Kora river)
2-1(2)	Operation time	not applicable
2-2	Pump	
2-2(1)	Туре	not applicable
2-2(2)	Manufacturer	not applicable
2-2(3)	Model, specification	not applicable
2-2 (4)	Output (kW)	not applicable
2-2(5)	Cycle (Hz), speed (rpm)	
		not applicable
2-2 (6)	Total head (m)	not applicable
	Total head (m)  Period of usage (installation month/ year)	
2-2 (6) 2-2 (7)	Period of usage (installation month/ year)	not applicable not applicable
2-2 (6)	1	not applicable
2-2 (6) 2-2 (7) 2-2 (8)	Period of usage (installation month/ year)  Diameter/ material of riser pipes	not applicable not applicable not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Period of usage (installation month/year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes	not applicable not applicable not applicable not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	not applicable not applicable not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source	not applicable not applicable not applicable not applicable not applicable not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	not applicable not applicable not applicable not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type	not applicable not applicable not applicable not applicable not applicable not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer Model, specification  Output (KVA)	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification  Output (kVA) Period of usage (installation month/ year)  Boreholes	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (2)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter Power source  Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds  Depth and material of borehole Depth and diameter of pumping chamber	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth, diameter and material of screen	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (5)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification Output (KVA) Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole Depth and diameter of pumping chamber Depth, diameter and material of screen Aquifer	not applicable
2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth, diameter and material of screen	not applicable

2-4 (8)	Pumping rate and draw down (actual)	not applicable
2-4 (9)	Position of pump (depth)	not applicable
2-5	Transmission / distribution facilities	••
2-5 (1)	Dia., length and material of transmission pipe	not applicable
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	not applicable
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	not applicable
2-5 (4)-2	Private connections (set)	not applicable
2-5 (4)-3	Cattle troughs (set)	not applicable
2-5 (5)	Existence of water meter	not applicable
3	Operation and maintenance system	пот аррисаос
3-1		
	Organization	not applicable
3-1 (1)	Type	not applicable
3-1 (2)	Year of establishment	not applicable
3-1 (3)	Contact person	not applicable
3-2	Staffs	
3-2 (1)	Number of staffs	0
3-2 (1)	Experience of operator (year)	not applicable
3-2 (2)	Operator's experience of training	not applicable
3-2 (3)	operator's experience of training	not applicable
3-3	Water tariff	
3-3(1)	Water tariff	not applicable
2.2.(2)		
3-3 (2)	Collection rate (%)	not applicable
3-3 (3)	The amount of the water used (m³/day)	0.0
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	not applicable
3-4 (2)	Name of financial institutions	not applicable
3-4 (3)	Amount of remaining funds	not applicable
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	not applicable
3-5 (2)	To whom ask to repair	not applicable
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	200 birr/ household
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	25-50 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2 (2)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	0.0
6-2	Sufficiency rate of safe water (%)	0
7	Any other water supply projects	None
	11717	

Small Town Profiles (81/90)
Small Town Profiles (82/90)



Legend

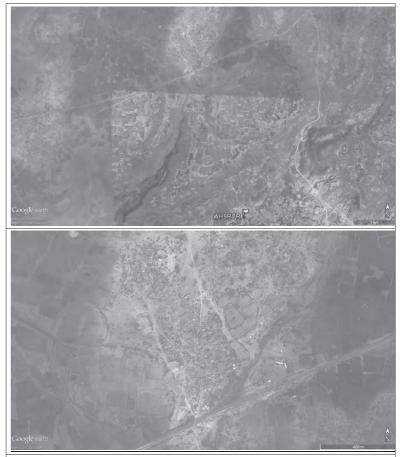
BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (WH-9)

	ID	WH-9
	Administrative	
	Town	Aneno
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	
	UTM-E(Adindan)	665114
	UTM-N (Adindan)	1010056
	Altitude (m)	1319
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,851
1-2	Category urban/rural	Rural
1-3	Satellite villages	0
1-3	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (100%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	0
1-9	Rate of power failure (%)	27%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	no facility, surface water (Kora river)
2-1(2)	Operation time	not applicable
2-2	Pump	
2-2(1)	Type	not applicable
2-2 (2)	Manufacturer	not applicable
2-2 (3)	Model, specification	not applicable
2-2 (3)	Wodel, specification	пот аррисави
2-2 (4)		
2-2 (4)	Output (kW)	not applicable
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (5) 2-2 (6)		
2-2 (5)	Cycle (Hz), speed (rpm)	not applicable
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	not applicable not applicable
2-2 (5) 2-2 (6)	Cycle (Hz), speed (rpm) Total head (m)	not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)	not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)	not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes	not applicable not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	not applicable not applicable not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter	not applicable not applicable not applicable not applicable not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA)	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(3) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA) Period of usage (installation month/ year) Boreholes	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(3) 2-3(5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 (2) 2-3(3) 2-3(4) 2-3(5) 2-4 2-4 (1)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA) Period of usage (installation month/ year) Boreholes	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 (1) 2-4 (2) 2-4 (2) 2-4 (3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-2 (10) 2-3 (2) 2-3(3) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 (1) 2-4 (2)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(5) 2-4 (1) 2-4 (2) 2-4 (2) 2-4 (3)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3 (2) 2-3 (2) 2-3 (3) 2-3 (2) 2-3 (3) 2-3 (5) 2-4 (1) 2-4 (2) 2-4 (3) 2-4 (4)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of soreen	not applicable
2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3(2) 2-3(3) 2-3(4) 2-3(4) 2-4 (2) 2-4 (2) 2-4 (3) 2-4 (5)	Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (KvA) Period of usage (installation month/ year) Boreholes Year of borehole construction/ funds Depth and material of borehole Depth diameter of pumping chamber Depth, diameter and material of screen Aquifer	not applicable

Small Town Profiles (83/90)
Small Town Profiles (84/90)

2-4(8)	Pumping rate and draw down (actual)	not applicable
2-4 (9)	Position of pump (depth)	not applicable
2-4 (9)	Transmission / distribution facilities	пот аррисавие
	Dia., length and material of transmission pipe	not oneliooklo
2-5 (1)	Dia., length and material of transmission pipe	not applicable
2-5 (2)	Specification of distribution reservoir	not applicable
2-5 (3)	Dia., length and material of distribution pipe	not applicable
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	not applicable
2-5 (4)-2	Private connections (set)	not applicable
2-5 (4)-3	Cattle troughs (set)	not applicable
2-5 (5)	Existence of water meter	not applicable
3	Operation and maintenance system	
3-1	Organization	
3-1(1)	Туре	not applicable
3-1(2)	Year of establishment	not applicable
3-1 (3)	Contact person	not applicable
3-2	Staffs	
3-2(1)	Number of staffs	0
3-2(2)	Experience of operator (year)	not applicable
3-2 (3)	Operator's experience of training	not applicable
3-3	Water tariff	
3-3 (1)	Water tariff	not applicable
5-5 (1)	wacrtain	постружани
3-3(2)	Collection rate (%)	not applicable
3-3 (3)	The amount of the water used (m³/day)	0.0
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	not applicable
3-4 (2)	Name of financial institutions	not applicable
3-4 (3)	Amount of remaining funds	not applicable
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	not applicable
3-5 (2)	To whom ask to repair	not applicable
4	Intension to participate in new project	
4-1	Intension to participate in new project	yes
4-2	Maximum amount pay for construction	10,000 birr or more
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	25 birr/m <sup>3</sup>
4-5	Intension to pay for equipment replacement	no, difficult to pay for pumps and generators
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	0~5
5-2	Water quality potential	
5-2 (1)	Fluoride (mg/L)	< 1.5 (assumption)
5-2(1)	Total hardness (mg/L)	< 300 (assumption)
6	Difficulty to access to safe water	· soo (mountain)
6-1	Safe water supply volume (L/c/d)	0.0
6-2	Sufficiency rate of safe water (%)	0
7	Any other water supply projects	None
/	rany omer water supply projects	None



## Legend

Small Town Profiles (85/90)

Small Town Profiles (86/90)

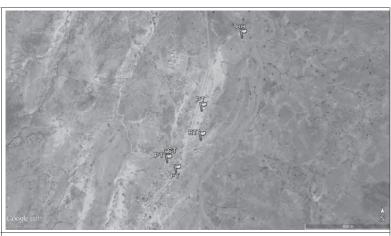
#### Small Town Profile (WH-10)

	ID	WH-10
	Administrative	
	Town	Belo
	Woreda	Mieso
	Zone	West Hararge
	Region	Oromia
	Coordinate	Oronia
	UTM-E(Adindan)	644399
	UTM-N (Adindan)	983865
	Altitude (m)	1232
		1232
No.	Item	
1	Population etc.	
1-1	Population (2014)	4,690
1-2	Category urban/rural	Rural
1-3	Satellite villages	3 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (97%), Argoba (3%)
1-6	Main occupation	Agriculture (farmer)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	18
1-9	Rate of power failure (%)	33%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(1)	intake identites	instance overlock (1)
2-1(2)	Operation time	7 days/week - 9 hrs/day (rainy season), 7 days/week - 9 hrs/day (dry
		season)
2-2	Pump	
2-2(1)	Туре	submersible pump
2-2 (2)	Manufacturer	Grundfos
2-2 (3)	Model, specification	no data
2-2 (4)	Output (kW)	13 kW,400V
2-2 (5)	Cycle (Hz), speed (rpm)	50Hz, 2890rpm
2-2 (6)	Total head (m)	no data
2-2 (7)	Period of usage (installation month/ year)	10 years since 2004
2-2 (8)	Diameter/ material of riser pipes	65mm/ GSP
2-2 (9)	Unit length/total number of riser pipes	no data
2-2 (10)	Existence of water flow meter	not installed
2-3	Power source	
2-3(1)	Туре	diesel generator
2-3(2)	Manufacturer	Tianjin Lovol
2-3(3)	Model, specification	1003TG14
2-3(4)	Output (kVA)	40 kVA
2-3(5)	Period of usage (installation month/ year)	8 months since June 2013
2-4	Boreholes	
2-4(1)	Year of borehole construction/ funds	2004, Oromia Regional Government
l		
2-4(2)	Depth and material of borehole	130m, steel
	Depth and material of borehole  Depth and diameter of pumping chamber	
2-4 (2) 2-4 (3) 2-4 (4)	Depth and diameter of pumping chamber	130m, 150mm
2-4 (3) 2-4 (4)	Depth and diameter of pumping chamber Depth, diameter and material of screen	130m, 150mm no data
2-4 (3) 2-4 (4) 2-4 (5)	Depth and diameter of pumping chamber Depth, diameter and material of screen Aquifer	130m, 150mm no data no data
2-4 (3) 2-4 (4)	Depth and diameter of pumping chamber Depth, diameter and material of screen	130m, 150mm no data

2-4 (8)	Pumping rate and draw down (actual)	2.6 m <sup>3</sup> /hr
2-4 (9)	Position of pump (depth)	105 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data, 75mm, GSP
2-5 (2)	Specification of distribution reservoir	80m³
2-5 (3)	Dia., length and material of distribution pipe	no data-75mm-GSP, no data-50mm-GSP, no data-40mm-GSP
2-5 (4)	Existing water taps	
	Public taps (set)	3
	Private connections (set)	0
2-5 (4)-3		i
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	an instance (an innersoning)
3-1	Organization	
3-1 (1)	Туре	water committee
3-1 (2)	Year of establishment	2004
3-1 (3)	Contact person	Usman Hasano, Chairman, 0926-641723
3-2	Staffs	
3-2 (1)	Number of staffs	11
3-2 (1)	Experience of operator (year)	11 years
3-2 (3)	Operator's experience of training	yes, I week on the job site by Woreda WME office
3-3	Water tariff	
3-3 (1)	Water tariff	201: 4 3
3 3 (1)	water tall.	20 bin/m³
3-3(2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	12.2
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	CBE Mieso branch, Golokha Water Committee
3-4 (3)	Amount of remaining funds	yes, 11,000 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	maintenance by Woreda WME office
4	Intension to participate in new project	
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	20% of the project cost
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	20 birr/m³ (in case of generator) and 15 birr/m³ (in case of public power supply)
4-5	Intension to pay for equipment replacement cost	yes
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	0~5
5-1		V J
	Water quality potential Fluoride (mg/L)	0.65
5-2 (1) 5-2 (2)	Total hardness (mg/L)	78
		//
6	Difficulty to access to safe water	26
6-1	Safe water supply volume (L/c/d)	2.6
6-2	Sufficiency rate of safe water (%)	7.7
/	Any other water supply projects	None

Small Town Profiles (87/90)

Small Town Profiles (88/90)



## Legend

BH: Borehole, SP: Spring, RV: River, CC: Collection Chamber, BP: Booster Pumping Station, RT: Reservoir Tank, PT: Public Tap, CT: Cattle Trough, BHHP: Borehole with Hand Pump, DWHP: Hand Dug Well with Hand Pump

## Small Town Profile (WH-11)

	ID	WH-11
	Administrative	WIFII
	Town	Kora
-	Woreda	Mieso
-	Zone	West Hararge
	Region	Oromia
	Coordinate	Oroma
	UTM-E(Adindan)	668599
-		1006889
-	UTM-N (Adindan)	1263
	Altitude (m)	1203
No.	Item	
1	Population etc.	
1-1	Population (2014)	2,376
1-2	Category urban/rural	Rural
1-3	Satellite villages	5 kebeles
1-4	Increase/decrease after construction	increasing
1-5	Distribution of ethnic group in the town	Oromo (95%), Others (5%)
1-6	Main occupation	Merchant (employee)
1-7	Grade of the town	None
1-8	Distance from paved road (km)	6
1-9	Rate of power failure (%)	8%
2	Existing water supply facilities	
2-1	Intake facilities	
2-1(1)	Intake facilities	motorized borehole (1)
2-1(2)	Operation time	7 days/week - 2.5 hrs/day (rainy season), 7 days/week - 2.5 hrs/day (dry
		season)
2-2	Pump	
2-2(1)	Type	submersible pump
2-2(2)	Manufacturer	Grundfos
	Model, specification	no data
2-2 (3)	Model, specification	no data
	Model, specification	no data
		no data 13 kW .400V
2-2 (3)	Model, specification  Output (kW)	
2-2 (3)	Output (kW)	13 kW,400V
2-2 (3) 2-2 (4) 2-2 (5)	Output (kW)  Cycle (Hz), speed (rpm)	13 kW.400V 50Hz, 3950rpm
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	13 kW.400V 50Hz, 3950rpm 170m
2-2 (3) 2-2 (4) 2-2 (5)	Output (kW)  Cycle (Hz), speed (rpm)	13 kW.400V 50Hz, 3950rpm
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)	13 kW,400V 50Hz, 3950rpm 170m 10 yeas since 2004
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)	13 kW.400V 50Hz, 3950rpm 170m
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8)	Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes	13 kW,400V  50Hz, 3950rpm  170m  10 yeas since 2004  50mm/ GSP
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes	13 kW,400V  50Hz, 3950rpm 170m 10 yeas since 2004  50mm/ GSP no data
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	13 kW,400V  50Hz, 3950rpm  170m  10 yeas since 2004  50mm/ GSP
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3	Output (kW)  Cycle (Hz), speed (rpm) Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source	13 kW,400V  S0Hz, 3950rpm 170m 10 yeas since 2004  50mm/ CSP no data installed but not working
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter	13 kW,400V  50Hz, 3950rpm 170m 10 yeas since 2004  50mm/ GSP no data
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type	13 kW ,400V  S0Hz, 3950rpm 170m 10 yeas since 2004  S0mm/ CSP no data installed but not working diesel generator
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1)	Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer	13 kW,400V  S0Hz, 3950rpm 170m 10 yeas since 2004  S0mm/ GSP  no data installed but not working  diesel generator  Sisu Diesel
2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification	13 kW,400V  50Hz, 3950rpm 170m 10 yeas since 2004  50mm/ GSP no data installed but not working  diesel generator  Sisu Diesel 320 DRG (DN3-AJ48PSCI)
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-3 (1) 2-3(2) 2-3(3) 2-3(4)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)	13 kW ,400V  S0Hz, 3950rpm  170m  10 yeas since 2004  50mm/ GSP  no data installed but not working  diesel generator  Sisu Diesel  320 DRG (DN3-AJ48PSCI)  40 kVA
2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification	13 kW,400V  50Hz, 3950rpm 170m 10 yeas since 2004  50mm/ GSP no data installed but not working  diesel generator  Sisu Diesel 320 DRG (DN3-AJ48PSCI)
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	13 kW ,400V  S0Hz, 3950rpm  170m  10 yeas since 2004  50mm/ GSP  no data installed but not working  diesel generator  Sisu Diesel  320 DRG (DN3-AJ48PSCI)  40 kVA
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year) Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year) Boreholes	13 kW,400V  S0Hz, 3950rpm  170m  10 yeas since 2004  50mm/ GSP  no data installed but not working  diesel generator  Sisu Diesel 320 DRG (DN3-AJ48PSCI) 40 kVA  1 year 2 month since Dec. 2012
2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (9) 2-2 (10) 2-3 2-3(1) 2-3(2) 2-3(3) 2-3(4) 2-3(5)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)	13 kW ,400V  S0Hz, 3950rpm  170m  10 yeas since 2004  50mm/ GSP  no data installed but not working  diesel generator  Sisu Diesel  320 DRG (DN3-AJ48PSCI)  40 kVA
2-2 (3)  2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds	13 kW ,400V  50Hz, 3950rpm 170m 10 yeas since 2004  50mm' GSP  no data installed but not working  diesel generator  Sisu Diesel 320 DRG (DN3-AJ48PSCI) 40 kVA 1 year 2 month since Dec. 2012  2004, IRC (International Rescue Committee)
2-2 (4)  2-2 (5) 2-2 (6) 2-2 (7)  2-2 (8)  2-2 (9) 2-2 (10) 2-3 2-3(1)  2-3(2) 2-3(3) 2-3(4) 2-3(5)  2-4 2-4 (1) 2-4 (2)	Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds Depth and material of borehole	13 kW ,400V  S0Hz, 3950rpm 170m 10 yeas since 2004  50mm/ CSP no data installed but not working  diesel generator  Sisu Diesel 320 DRG (DN3-A148PSCI) 40 kVA 1 year 2 month since Dec. 2012  2004, IRC (International Rescue Committee) 40m, steel
2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-4 (1)  2-4 (2)  2-4 (2)	Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	13 kW,400V  S0Hz, 3950rpm 170m 10 yeas since 2004  S0mm/ GSP  no data installed but not working  diesel generator  Sisu Diesel 320 DRG (DN3-AJ48PSCI) 40 kVA 1 year 2 month since Dec. 2012  2004, IRC (International Rescue Committee)  40m, steel 40m/ 150mm
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-4 (1)  2-4 (2)  2-4 (2)  2-4 (3)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth, diameter and material of screen	13 kW ,400V  50Hz, 3950rpm 170m 10 yeas since 2004  50mm' GSP  no data installed but not working  diesel generator  Sisu Diesel 320 DRG (DN3-AJ48PSCI) 40 kVA 1 year 2 month since Dec. 2012  2004, IRC (International Rescue Committee)  40m, steel 40m / 150mm no data
2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-4 (1)  2-4 (2)  2-4 (2)	Output (kW)  Cycle (Hz), speed (rpm) Total head (m) Period of usage (installation month/ year)  Diameter/ material of riser pipes Unit length/total number of riser pipes Existence of water flow meter Power source Type  Manufacturer Model, specification Output (kVA) Period of usage (installation month/ year)  Boreholes Year of borehole construction/ funds Depth and material of borehole Depth and diameter of pumping chamber	13 kW,400V  S0Hz, 3950rpm 170m 10 yeas since 2004  50mm/ CSP no data installed but not working  diesel generator  Sisu Diesel 320 DRG (DN3-AJ48PSCI) 40 kVA 1 year 2 month since Dec. 2012  2004, IRC (International Rescue Committee)  40m, steel 40m/ I50mm no data no data
2-2 (3)  2-2 (4)  2-2 (5)  2-2 (6)  2-2 (7)  2-2 (8)  2-2 (9)  2-2 (10)  2-3  2-3(1)  2-3(2)  2-3(3)  2-3(4)  2-4 (1)  2-4 (2)  2-4 (2)  2-4 (3)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth, diameter and material of screen	13 kW ,400V  50Hz, 3950rpm 170m 10 yeas since 2004  50mm' GSP  no data installed but not working  diesel generator  Sisu Diesel 320 DRG (DN3-AJ48PSCI) 40 kVA 1 year 2 month since Dec. 2012  2004, IRC (International Rescue Committee)  40m, steel 40m / 150mm no data
2-2 (3) 2-2 (4) 2-2 (5) 2-2 (6) 2-2 (7) 2-2 (8) 2-2 (10) 2-3 2-3 (1) 2-3 (2) 2-3 (3) 2-3 (4) 2-3 (5) 2-4 (2) 2-4 (3) 2-4 (4) 2-4 (4) 2-4 (4) 2-4 (5)	Output (kW)  Cycle (Hz), speed (rpm)  Total head (m)  Period of usage (installation month/ year)  Diameter/ material of riser pipes  Unit length/total number of riser pipes  Existence of water flow meter  Power source  Type  Manufacturer  Model, specification  Output (kVA)  Period of usage (installation month/ year)  Boreholes  Year of borehole construction/ funds  Depth and material of borehole  Depth and diameter of pumping chamber  Depth, diameter and material of screen  Aquifer	13 kW,400V  S0Hz, 3950rpm 170m 10 yeas since 2004  50mm/ CSP no data installed but not working  diesel generator  Sisu Diesel 320 DRG (DN3-AJ48PSCI) 40 kVA 1 year 2 month since Dec. 2012  2004, IRC (International Rescue Committee)  40m, steel 40m/ I50mm no data no data

Small Town Profiles (89/90)

Small Town Profiles (90/90)

2-4(8)	Pumping rate and draw down (actual)	20 m³/hr
2-4 (9)	Position of pump (depth)	37 m
2-5	Transmission / distribution facilities	
2-5 (1)	Dia., length and material of transmission pipe	no data, 75mm, GSP
2-5 (2)	Specification of distribution reservoir	50m³
2-5 (3)	Dia., length and material of distribution pipe	no data, 65mm, CSP
2-5 (4)	Existing water taps	
2-5 (4)-1	Public taps (set)	4
	Private connections (set)	75
	Cattle troughs (set)	0
2-5 (5)	Existence of water meter	all installed (all functioning)
3	Operation and maintenance system	
3-1	Organization	
3-1(1)	Туре	water committee
3-1(2)	Year of establishment	2004
3-1 (3)	Contact person	Nejibo Jadido, Chairman, 0920-364079
3-2	Staffs	
3-2(1)	Number of staffs	12
3-2(2)	Experience of operator (year)	2 years
3-2 (3)	Operator's experience of training	no
3-3	Water tariff	
3-3(1)	Water tariff	19 birr/m <sup>3</sup> for public taps and 20 birr/m <sup>3</sup> for private connection
		17 out in 101 public taps and 20 out in 101 private connection
3-3(2)	Collection rate (%)	100%
3-3 (3)	The amount of the water used (m³/day)	37.8
3-4	Remaining funds	
3-4(1)	Where to keep remaining funds	bank
3-4 (2)	Name of financial institutions	CBE Mieso branch, Kora Rural Town Water Committee
3-4 (3)	Amount of remaining funds	yes, 87,000 birr (bank) and 5,000 birr (cash)
3-5	Procedure of repairing works	
3-5 (1)	How to provide the fund for repair	remaining fund
3-5 (2)	To whom ask to repair	repaired at private garage in Awash Town
4	Intension to participate in new project	1,000,000
4-1	Intension to participate	yes
4-2	Maximum amount pay for construction	no idea
4-3	Intension to establish O&M organization	yes
4-4	Set tariff per cubic meter	20 birr/m³ (if case of generator), reducing tariff in case public power supply will be connected
4-5	Intension to pay for equipment replacement cost	no, difficult to pay for pumps and generators
5	Groundwater development potential	
5-1	Water quantity potential (L/sec)	10~
5-2	Water quality potential	
5-2(1)	Fluoride (mg/L)	0.50
5-2(2)	Total hardness (mg/L)	656
6	Difficulty to access to safe water	
6-1	Safe water supply volume (L/c/d)	15.9
6-2	Sufficiency rate of safe water (%)	45.8
7	Any other water supply projects	None



## Legend

# Data 8

Layout of Provisional Water Supply Plans

