ZAATARI CAMP WASH CONTINGENCY PLANS FOR SUDDEN WATER SUPPLY AND DESLUDGING SERVICES INTERRUPTIONS

1. INTRODUCTION

Zaatari Refugee camp is host to some 83,000 refugees, representing the largest refugee population camp in Jordan. The WASH sector is supporting the key WASH related interventions; including supply of 3,600m3 of water, dislodging some 2,400m3 of sewage, solid waste management, hygiene promotion and overall WASH coordination and management. Water is delivered to the refugees from both internal wells (UNICEF constructed) and external privately owned wells. The construction of a third internal borehole is completed and is expected to be in fully operation in June. Thus, the camp's reliance on external wells will soon be almost entirely eliminated except during periods of internal boreholes failure and peak summer season.

However even with water supply from internal sources, and until the water supply network is completed by May 2016, water trucking remains the sole means of delivering water to the refugees. Water trucking is not only expensive and operationally very complicated; it is also characterized by repeated industrial actions by service providers (truck owners and drivers). These strikes often partially or total paralyzed the water supply system. The most recent industrial action led to a complete halt of water supply and desludging operations in the camp that inevitably caused water shortages in various locations in the camp.

While negotiations and advocacy is being stepped to ensure that future industrial actions does not completely paralyze the water supply to the refugees, there is no guarantee that such actions will not reoccur in the near future.

With the imminent advent of Ramadan and peak summer that is associated with elevated temperatures, water needs are significantly very high. Therefore any interruption in water supply to the camp will have immense impact on the refugees. It is therefore prudent that the WASH sector makes plans to internally respond to any future actions by water trucking service providers.

This contingency plans therefore supervises a number of actions that would be undertaken prior to and during any strike action to ensure minimum quantities of water is delivered to refugees even when trucking is completely halted.

2. SCENARIOS, BASES AND COMMITMENT OF THE PLAN

2.1 Bases and assumptions

Based on the knowledge and experience of working in the camp and past strikes, the contingency plan is based on three main scenarios, as described in the table below.

Table 1: Possible scenarios related to the contingency plan

Scenario	Consequence	Specific Actions (see Table xxx below for details)	Remarks
1. Partial strike with fully functioning boreholes	Some water trucks working, desludging activities unaffected and all three boreholes functioning.	1. Truck water to Districts **1,2, 11 and 12** using the limited trucks	Districts 1, 2 and 12 can only be served through water trucking
		2. Pump water from BH 3 pipeline to Districts **6 and 5**	This pipeline is already in operation and functional. Its optimization is ongoing
		3. Supply water to Districts **3 and 4** through the Case Camp filling point from external pipeline	This borehole can provide maximum 20l/c/day for the two districts
		4. Erect storage tanks at BH 1,2 and 3, connected to a distribution pipe system, from where refugees from **D 7,8,9 and 10** can directly collect water	
2. Total strike with all the three internal boreholes functional	2.1 All truck drivers go on strike. No external trucking. Contractor unable to make any truck available for internal trucking	1. Truck water to Districts **1,2, and 12** using dump and pick-up trucks	Districts 1, 2 and 12 can only be served through water trucking
		2. Pump water from BH 3 pipeline to Districts **6 and 5**	This pipeline is already in operation and functional. Its optimization is ongoing
		3. Supply water to Districts **3 and 4** through the Case Camp filling point from external pipeline	This borehole can provide maximum 20l/c/day for the two districts
		4. Erect storage tanks at BH 1,2 and 3, connected to a distribution pipe system, from where refugees from **D 7,8,9 and 10** can directly collect water	
		5. D10 and D11will be served through temporary T-95 storage tanks erected in the districts	

	2.2 Limited number of sewage trucks (minimum five) present in the camp	1. Desludging of public septic tanks on a case by case basis to the internal wastewater treatment plant	This is wholly dependent on prepositioning of at least 5 sewage trucks in the camp by contractor
		2. Seek permission from camp management for extension of working hours. UNICEF to request this permission after contractor provide details of trucks and drivers	This will be processed as soon as we receive the truck details from contractor
3. Total strike with one borehole not functional	3.1 All truck drivers go on strike. No external trucking. Contractor unable to make any truck available for internal trucking and only two of three boreholes functional. Borehole 1 not functional.	1. Truck water to Districts **1,2, and 12** using dump and pick-up trucks	Districts 1, 2 and 12 can only be served through water trucking
		2. Request permission for the extension of water trucking beyond normal working hours	To be arranged in advance
		3. Pump water from BH 3 pipeline to Districts **6 and 5**	This pipeline is already in operation and functional. Its optimization is ongoing
		4. Supply water to Districts **3 and 4** through the Case Camp filling point from external pipeline	This borehole can provide maximum 20l/c/day for the two districts
		5. Erect storage tanks at BH 1,2 and 3, connected to a distribution pipe system, from where refugees from **D 7,8,9 and 10** can directly collect water	
		6. D10 and D11will be served through temporary T-95 storage tanks erected in the districts	

2.2 Commitment

During such water supply interruptions, the WASH sector will deliver minimum **15 liters per capita per day**, to all refugees in all the districts in the camp as follows:

Table 2: District minimum allocation

District	Current Adjusted Population	Contingency Allocation (m^3) (15 L/p/day)	Contingency Allocation plus (m^3) 5% losses (15 L/p/day)
D1	7,180	108	113
D2	8,228	124	130
D3	5,458	82	86
D4	4,945	75	79
D5	6,182	93	98
D6	7,766	117	123
D7	7,784	117	123
D8	8,763	132	139
D9	5,309	80	84
D10	7,004	106	111
D11	9,117	137	144
D12	6,120	92	97
Total	**83,856**	**1,263**	**1,326**

2.3 Prioritization

While all efforts will be made to deliver water to all institutions in the camp, the following order of prioritization will be followed regardless of the scenario:

i. Refugees' public water storage tanks
ii. Hospitals (cater for inpatient, then outpatient then staff)
iii. Schools
iv. Offices (Base Camp, SRAD, NGOs, etc)
v. Non-formal education and learning centers (CFS, MACs, etc)
vi. Community centers
vii. Others

2.4 Water source and distribution Plan

Water will be delivered to refugees in the 12 districts according to the following table.

Table 3: Planned Source and methods of water delivery for each district

District	Water distribution source and method
D1	Water trucking
D2	Water trucking
D3	Filling station connected to Dr. Qadi borehole
D4	T95 connected to filling station in D3
D5	T95 connected to Borehole #3 (water network storage)
D6	T95 connected to Borehole #3 serving piped network
D7	T95 connected to Borehole #3 (water network storage)
D8	T95 connected to Borehole #2 (water network storage)
D9	T95 connected to Borehole #2 (water network storage)
D10	Borehole #1
D11	T95 connected to Borehole #1
D12	Water trucking

2.5 Water quality monitoring

Water quality monitoring shall remain an integral part of the contingency plan. Water supplied shall be subject to water quality monitoring in accordance with the agreed Standard Operating Procedures for managing water quality in Zaatari Camp.

3. ACTION PLAN

Objective/Action	Specific Actions	Focal Person	Time frame	Remarks
All three boreholes are functional	Optimize BH 1	UNICEF	Urgently	This will ensure improved pumping capacity of the system
	Ensure presence of UNICEF to ensure proper O&M	UNICEF	Once the response is triggered	This will ensure that no one attempt to sabotage the operations of the wells
	Dispatch 40 (TBC as per above schedule) staff to support filling and security at boreholes and Base camp filling area.	ACTED	Once the response is triggered	This teams will maintain order and support the filling of storage tanks
Installation of temporary storage tanks (T95) in specific districts	Identify the specific locations for installation of the tanks.	OXFAM, ACTED and JEN	By 2nd June 2015	Tentatively, 2 tanks between D3 and D4 and one 2 around D10 and D11
	Liaise with site planning for permission to use the spaces	UNHCR	By 4th June 2015	
	Lead community mobilization related to installation of the tanks	District Lead WASH IP	Commence once tanks sites are identifies and approves	
	Installation of the tanks. The tanks shall be installed, tested and disinfected prior to the response	OXFAM	Installation to commence on (OXFAM)????	
	Installation of temporary perimeter fencing around the tanks	OXFAM	Installation to commence on (OXFAM) ????	

	Prioritize the installation of at least one storage tank in each of the OXFAM water network target districts. The tanks tested and disinfected as soon as they are installed	OXFAM	As soon as Phase 1 contractor commence work	These tanks can be used as future storage tanks for the response
Installation of temporary pipelines to fill storage tanks directly from boreholes and intermediate storage areas.	Design and install one Pipeline from base camp filling area to proposed tanks sites in D3-D4	ACTED	All materials to be ready in Zaatari by (XXXXX) Installation to be done only when response is triggered.	Once costs are established and agreed, UNICEF to approve the procurement
	Design and install one Pipeline from BH1 to proposed tanks sites in D10-D11	ACTED (lead) OXFAM and JEN (support)	Pipeline to be installed only when response is triggered	Once costs are established and agreed, UNICEF to approve the procurement
	Design a mobile 2km pipeline (including pump and installations) that can be installed to fill tanks in distant locations of the camp	ACTED (lead) OXFAM and JEN (support)	All materials to be ready in Zaatari by (XXXXX) Installation to be done only when response is triggered.	Once costs are established and agreed, UNICEF to approve the procurement
Optimize the pipeline between BH3 and D6 storage tanks	Resize and install appropriate pump on a separate outlet to increase flow rate from 20m^3 to 45 m^3, to increase performance of the pipeline	UNICEF/ Site Group	By 4th June 2015	To be used even under normal operations
Optimize the performance of the Base Camp filling area	Identify supplier (including daily rate, availability) for hiring portable power generator or pump (30 KVA?) that can be used for filling storage tanks	ACTED	By 4th June 2015	Once costs are established and agreed, UNICEF to pre approve the procurement

Arrangements for trucking water to the distant areas of the Camp (D1, D2 and D12)	Identify supplier (including daily rate, availability) for hiring dump trucks (5??) that can be used for trucking	ACTED	By 4th June 2015	Once costs are established and agreed, UNICEF to pre approve the procurement
Set up distribution points at three borehole outlets	Install 20 smaller storage tanks at each borehole (especially 1 and 3), and a pipe system with at least 40 taps or outlets	ACTED, OXFAM and JEN	Will be installed once the response is triggered	
Set up distribution points at Base Camp filling area and proposed storage tanks areas	Install multiple faucets/taps networks around the storage tanks. Distribution points can also be extended depending on the slope and space availability	ACTED, OXFAM and JEN	Will be installed once the response is triggered	

4. INVENTORY OF AVAILABLE WASH EQUIPMENT AND MATERIALS

SN	Organization	Equipment/ Item description	Quantity	Location	Installation needs/remarks
1	UNICEF	Dewatering pump, diesel driven, 2" complete set	05	Zaatari camp	None, fuel only
2	UNICEF	T 95 storage tanks, complete set	03	Amman Store	Can be delivered in 5 days
3	UNICEF	To be updated			
		To be updated			
		To be updated			
		To be updated			
		To be updated			

5. RESPONSE PROTOCOL:

3.1 Triggering of the Contingency response

The contingency response actions will come into effect as soon as the sector receives credible information of the potential interruption in water supply within 24hours. A formal email will be sent to all the focal persons from the various sector members for action. Depending on the interruption scenario, only specific actions could be triggered.

3.2 Communication Approach

Focal points are solely responsible for communication outside of their organization. Communication between WASH partners should go only through the focal persons of that organization to the focal point of the partner organization, with the exception of community mobilization teams which act sub-groups and can disseminate agreed messages to their target audiences, under the oversight of the focal persons.

3.3 Preparing daily response updates

Reports or updates related to the response shall be prepared and shared according to the following:

Time	Action	Responsible person	Remarks
09:00	Share situation and response updates with the Response coordinator	Focal persons for WASH Sector members	Updates must be very brief (any changes in the situation and actions
09:00-10:00	Compiles updates and share with the sector and management	Contingency response coordinator	Distribution should include the WASH sector, camp management and WASH agency management teams
17:00	Share situation and response updates with the Response coordinator	Focal persons for Sector members	Updates must provide details of the situation, actions taken, targets reached, etc.
17:00–18:00	Compiles updates and share with the sector and management	Contingency response coordinator	Distribution should include the WASH sector, camp management and WASH agency management teams

Note: A reporting template will be prepared by the response coordinator.

3.4 Sharing operational updates

In addition to the formal situation updates, operational updates that may trigger specific actions on the ground could also be shared through focal points via These unscheduled updates can be shared through email, SMS or telephone calls and could take place among sector members

3.5 Community mobilization

The community mobilization Working group shall meet and agree on and pre approve a set of messages that will be used for social mobilization. The selection of what message to disseminate at any given time will be done by the community mobilization working group, guided by the prevailing situation, and approved by the response coordinator.

3.6 Crowd management and security arrangements

During the response, managing crowd at water collection points shall be the responsibility of the district lead organization. The responsible organization shall deploy adequate number of staff to manage the water collection by refugee at distribution points. Where necessary, barriers shall be set up to enhance better crowd management.

SRAD shall be requested to conduct roaming patrols around water delivery and collection locations. SRAD shall also designate a focal point who can be contacted directly when there are potential crowd management challenges.

3.7 Caseation of response

The contingency response actions will come to an end as soon as the sector receives credible information of the resumption of normal operations. Such information will be verified by in the field, ensuring that trucks are delivering water in accordance with the normal operational plans of ACTED. A formal email will be sent to all the focal persons from the various sector members for action.

Once the response activities come to an end and there is no indication of potential resumption of the strikes in the immediate future (within 14 days), a phased decommissioning will commence. The responsibility for decommissioning will lie with the installing or assembling agency or organization.

3.8 List of focal persons

SN	Name of person	Organization	Telephone No.	Email address
1	Habib Rehman	UNICEF/ Coordinator		hrehman@unicef.org
2	Abrassac Kamara	UNICEF/ Water		abkamara@unicef.org
3	Ahmad Al Tarawnah	UNICEF/ CMob		aaltarawanah@unicef.org
4	Please update	UNHCR/Water		
5	Please update	UNHCR/ Support		
6	Laurence West	ACTED - Focal	0799 42 71 26	Laurence.west@acted.org
7	Caroline Avan	ACTED - Reserve	0790 21 27 18	Caroline.avan@acted.org
8	Nicolas Grijelmoperez-Salado	ACTED/Cmob		nicolas.grijelmoperez-salado@acted.org

9	Anne Rapin	JEN/Water	079 8591457	Anne.rapin@jen-npo.org
10	Mona Abd ElBaqi	JEN/Water	078 6590645	Zaatari-eng@jen-npo.org
11	Tasuku Futamura	JEN/ Water	099 398599	Tasuku.futamura@jen-npo.org
12	Faiz Muhammad Faiz	OXFAM/Water	079 6610062	FFaiz@oxfam.org.uk
13	Please update	OXFAM/Reserve		
14	Please update	OXFAM/Cmob		
15	Please update	IRD CMob		
16		SRAD		
17				
18				
19				
20				

3.9 Communication with external stakeholders

All communications to camp management and local authorities shall be led by UNICEF Camps coordinator or designated focal person. This communication includes negotiation with the protagonists, influencing and mobilizing national support and advocacy.

6. WASTEWATER MANAGEMENT

Currently, UNICEF is managing wastewater in the camp through a private contractor. The private contractor, on a daily basis desludges about 2,700m3 of wastewater from the camp and delivers about 55% to the Al Akaidar treatment plant and the remaining 45% to the internal treatment plant. Coincidentally, this private desludging contractor is the same as the water supply trucking sub-contractor.

Based on the previous strike experience, there is a very strong likelihood that any strike initiated by the water supply service providers will also lead to the disruption of desludging services; desludging truck owners/drivers joined the strike either in solidarity or compelled to do so.

While the WASH sector can make internal arrangements to significantly respond to water supply interruption in the camp, there are very limited options for managing wastewater in case of any disruption. Therefore, the proposed contingency arrangements include:

1. The desludging contractor prepositioning at least five desludging trucks;
   - ¬ Staying overnight in the camp
   - ¬ With drivers hired from outside Mafraq Governorate
   - ¬ Advance permit obtained for them to work after normal working hours if needed

2. Negotiate with the municipality for the use of their desludging trucks when required
   - ¬ Sign an MOU with the municipality to undertake desludging in the camp

- Agree on cost and payment arrangements for desludging services in the camp
- Obtain advance entry permit for municipality trucks and for extended working hours

ANNEX 1 – CALCULATIONS OF SUPPLY AND OVER HEADS

Boreholes production capacity and use during strikes

District	New Network T95?	Population	Total m3 at 35l/c/d	Total m3 at 15l/c/d + 5% losses	Collection time in hours	Actual filling time dampener	Hourly M3 at 15/l/c/d
D5	Yes	6,182	217	98	12	0.8	**10.21**
D6	Yes	7,766	272	123	12	0.8	**12.79**
D7	Yes	7,790	273	123	12	0.8	**12.84**
D8	Yes	8,763	307	139	12	0.8	**14.44**
D9	Yes	5,309	186	84	12	0.8	**8.75**
D10	Yes	7,004	246	111	12	0.8	**11.57**
D11	Yes	9,117	320	144	12	0.8	**15.05**

Total daily BH production		Assigned Districts	Approx m3/hour	District m3/hour	Match?	Overhead in m3	Adding D5 new overhead in m3
BH 1	1,020	10&11	55	26.62	Yes	33.38	-
BH 2	1,160	8 & 9	55	23.19	Yes	31.81	-
BH 3	1,320	6 & 7	60	25.63	Yes	29.37	19.16

Filling station

15l/c/d + 5% in m3 - no Agencies		
D3 Pop	5458	85.9635
D4 Pop	4945	77.88375
Agency	-	0
Total m3 /day		163.8473

Transmission	
0.40	
0.714285714	m3/min
42.85714286	m3/min

SR collection hours		
Time	12	hours
Total flow	13.65	m3 /hour
Damp	0.8	
Actual flow	17.07	m3 /hour
# taps	56	
Flow /tap	5.08	l/min
Overhead	6.35	m3 /hour

Borehole Production		
Production	20 - 25	m3/hour
# tanks	5	
Tank	25	m3
Total storage	125	m3
Time till cap	6.25	hours

Notes

- Production is not finalized as borehole is under repair
- Number of taps is TBC as filling station at D4 is not built