

Dhanusha Community Development Project
Community Drinking Water Supply and Sanitation Program

Submitted to:

WDSC/LEI

Janakpur, Dhanusha

Report on

**Shallow Ground Water Quality Analysis of Janakpur
Municipality -14 and Devpura Rupaitha Village Development
Committee, Dhanusha, Janakpurdham**

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1.0 BACKGROUND

Nearly 85% of the Nepalese population live in rural setting. Rural settlements scattered or clustered have a common problem of insufficient water supply infrastructure and poor sanitary conditions. It is related both with the insufficient water supply coverage, poor water quality and the unsanitary habits of the common people. The implication is on the high mortality and morbidity rates among the rural mass mostly associated with the water quality and waste disposal habits and waste management practices.

2.0 OBJECTIVE AND SCOPE OF STUDY

Primary objective of the study is to access the water quality and sanitary conditions of the shallow tube wells in Janakpur Municipality, and Devpura Rupaitha Village Development Committee in the Dhanusa District of Nepal.

Scope of the work area is confined to the Ward 14 of Janakpur Municipality and Ward 1 to 9 of Devpura Rupaitha VDC of the Dhanusa District. The scope of the work covers:

- a. Survey and identification of the wells for sanitary inspection and water quality testing.
- b. Collection of information on (i) depth of well, (ii) diameter of well, (iii) length of screen, (iv) type of material used for casing pipe and screen, and (v) year of installation of the identified wells for sanitary inspection and water quality analysis.
- c. Collection of information on the numbers of wells and household coverage in the respective municipality wards and VDC.
- d. Location of the identified wells for sanitary inspection and water quality testing in maps of appropriate scale.
- e. Sanitary inspection and evaluation of the wells
- f. Collection of water samples from the identified wells for water quality analysis (physical, chemical and bio-chemical analysis)
- g. Analysis of the water samples for:
 1. PH
 2. Turbidity
 3. Conductivity
 4. Total Hardness
 5. Total Alkalinity
 6. Chloride
 7. Ammonia
 8. Nitrate
 9. Nitrate
 10. Iron
 11. Manganese
 12. Calcium
 13. Magnesium
 14. Arsenic
 15. E.Coli.
- h. Preparation of sanitary and water quality assessment report of the survey areas.

3.0 METHODOLOGY

A total of 5 days field survey was carried out from 28th Kartik, 2059 to 2nd Mangsir, 2059. Mr. Hira Lal Moktan, Hydro-geologist carried out the survey works including sampling of water samples for water quality testing.

Survey work included a reconnaissance of the area. Mrs. Meena K.C. (member of the Local NGO - Women Development Center) accompanied the hydro-geologist during the reconnaissance survey. Based on spatial distribution and population clusters, wells for sanitary inspection and water quality testing were identified in consultation with the local NGO representative and were located in the appropriate map (Map No.1 and 2).

The identified hand pumps/ tube wells were inspected on environmental and sanitary ground in appropriate format [Annex A 1(Janakpur municipality) and Annex A 2 (Devpura Rupaitha VDC)]. During sanitary inspection consultation with the user communities were made to collect data on (i) depth of well, (ii) diameter of well, (iii) type of material used for casing pipe and screen, and (iv) year of installation etc. Besides, information on the total numbers of wells and population covered by each well within the survey area were also collected.

Water Samples were collected from each of the sanitary inspected wells for water quality testing. Standard water sampling procedures were applied for the water sample collection for laboratory analysis. Water samples were collected in a 1-litre bottle for physico-chemical analysis. For biochemical analysis samples were collected in 250 ml sterilised bottles. 100-ml bottles were also used for collection of sample for Arsenic analysis. The sample bottle were preserved using specified chemicals and were placed in an ice box and transported to the laboratory {NESS (P) Ltd.} for the analysis of the specified parameters.

Soon after the arrival of the water samples, the samples were analysed for the specified parameters in the water quality laboratory of NESS (P) Ltd. by qualified water quality analytical chemists. Following testing procedures were applied for the analysis of samples (Table 3.1).

Table 3.1: Quality Parameters Analysed and Techniques Adopted for Analysis

S.N.	PARAMETERS	EQUIPMENTS AND PROCEDURES USED
1.	pH	pH meter (field)
2.	Conductivity (μ mhos/Cm)	Conductivity Bridge (field)
3.	Turbidity (NTU)	Nephelometer
4.	Ammonical – N (mg/l)	UV- VIS Spectrophotometric (Laboratory)
5.	Nitrite –N (mg/l)	UV- VIS Spectrophotometric (Laboratory)
6.	Nitrate –N (mg/l)	UV- VIS Spectrophotometric (Laboratory)
7.	Fe, Ca, Mg, Mn, As (Arsenic)	Atomic Absorption Spectrophotometer (Laboratory)
8.	Chloride (mg/l)	Argentometric Titration (Laboratory)
9.	E. Coli (MPN Index/100ml)	Multiple Tube method (Laboratory)

Reference: - Standard Methods for the Examination of Water and wastewater, 17th edition, 1989.

The results of the analysis are presented in Annex B 1 for Janakpur Municipality and Annex B 2 for Devpura Rupaitha VDC..

4.0 SURVEY RESULTS

4.1 Janakpur Municipality -14

A total of five handpumps were identified and surveyed in the Ward No 14 of Janakpur Municipality. Map No. 1 presents the distribution of the identified wells for sanitary inspection and water quality testing. Table 4.1 gives the details of the surveyed wells.

All of the wells are of 1.5 inch size. Well's average depth is about 210 ft from the ground surface and range between 175 to 350 ft. Normally 5 to 12 ft of screen is placed at various depth depending upon the water discharge/thickness of the aquifer. Materials used are mostly PVC pipes and screens except GI fittings near the ground surface. Most of the wells are more than 6 years old.

Average household coverage of the surveyed wells is 46 household per well. However, coverage per well range between 20 household to 60 household and nearly 60% of the surveyed wells covers more than 60 households per well.

Table 4.1: Hand Pump details/Household/ population covered of surveyed wells in Janakpur Municipality , Ward No. 14

SN	Well No.	Name of the Nearest HH Owner	Name of VDC /Village/Tole	Total HH Cover	Total Pop ⁿ	Well Depth (ft,bgl)	Well Size (inch)	length of Screen (ft)	Depth of screen (From ..ft to..ft)	Type of material used	Purpose of water use	Well Completion Date	Remarks
1.	HP1	Mushahari Tole	Janakpur Municipality – 14, Mushahari Tole	40	280	225	1.5	5	220 to 225	a. Casing from 0' to 5'-GI b. Rest of all(Casing & Screen) - PVC	Drinking , Bathing	2044	VDC Funded Well
2.	HP2	Kheru Ram	Janakpur Municipality – 14, Chamartole Tole	20	200	125	1.5	5	120 to 125	do	do	2044	VDC Funded Well
3.	HP3	Radha Library	Janakpur Municipality – 14	60	420	350	1.5	12	338 to 350	do	do	2059	Artesian Well
4.	HP4	Moti Mahara	Rajaul ,Janakpur Municipality –14	50	350	175	1.5	10	160 to 175	do	do	2053	VDC Funded Well
5.	HP5	Janta Ni . Madhyamik Vidyalaya, Belhi - Rajaul	Janakpur Municipality -14	School	400	175	1.5	10	160 to 175	do	do	2053	

Source: Survey results 2002.

Table 4.2: Groundwater Quality / Sanitary Inspection of Surveyed well in Janakpur Municipality - 14

SN	Well No.	Name of the Nearest HH Owner	Name of VDC /Village/Tole	Observed Iron Value (mg/l)	Observed Arsenic Value (mg/l)	Fecal Coliform Grade	Sanitary Inspection Risk Score	Combined risk/Action required
6.	HP1	Mushahari Tole	Janakpur Municipality – 14, Mushahari Tole	0.43	N.D.<0.01)	A	High	Urgent action
7.	HP2	Kheru Ram	Janakpur Municipality – 14, Chamartole Tole	N.D.<0.01)	N.D.<0.01)	A	High	Urgent action
8.	HP3	Radha Library	Janakpur Municipality – 14	N.D.<0.01)	N.D.<0.01)	A	High	Urgent action
9.	HP4	Moti Mahara	Rajaul ,Janakpur Municipality –14	1.34	N.D.<0.01)	C	Low	Intermediate action
10.	HP5	Janta Ni . Madhyamik Vidyalaya, Belhi - Rajaul	Janakpur Municipality - 14	0.38	N.D.<0.01)	A	Intermediate	Intermediate action

Note:**1. Fecal Coliform Grading**

FC Count/100 ml	Grade	Risk
0	A	No Risk
1-10	B	Low Risk
11-100	C	High Risk
101-1,000	D	Very High Risk

2. Sanitary Risk Score

Risk Score	Risk
0 - 2	Low Risk
3 - 5	Intermediate Risk
6 - 8	High Risk
9 – 12	Very High Risk

Nearly 60% of the wells have iron concentration above WHO prescribed limit of 0.3 mg/l. Arsenic is not detected and is below WHO prescribed value of 0.01mg/l. Aeration and sedimentation is required for more than 60% of the wells to bring the iron limits below WHO prescribed value. Except for microbiological parameters other water quality parameters are within the WHO prescribed Limits (for details of well refer Annex B 1).

Water quality analysis indicate that 80% of the wells have no fecal contamination, while sanitary inspection of the surveyed wells indicate that over 60% of wells have high contamination risks (Table 4.2, for details of well refer Annex A 1). Combined risk assessment analysis of the surveyed wells in Janakpur Municipality, ward 14 indicate that 60% of the wells require urgent action to ensure good water quality supply (refer Annex C).

4.2 Devpura Rupaitha VDC

Twenty wells were identified and surveyed in ward 1 to 9 of Devpura Rupaitha VDC from the pull of existing 427 wells. The wells were randomly selected on the basis their spatial distribution representing at least two from each ward to cover whole VDC. The distribution of identified wells for sanitary inspection and water quality testing are presented in Map No. 2. Details of the surveyed wells and wardwise number of wells are presented in Table 4.3 and 4.4 respectively.

All of the wells are of 1.5-inch size. Well's average depth is about 122 ft from the ground surface and range between 95 to 130 ft. Normally 5 to 10 ft screen is placed at various depth depending upon the water discharge/thickness of the aquifer. Materials used are mostly PVC pipes and screens except GI fittings near the ground surface. Most of the wells are more than 7 years old.

Devpura Rupaitha VDC data reveals 1124 households within the VDC whose water demand is met by 427 wells. On an average one well covers 3 households. The random survey results, however, shows that more than 25% of the households use one well per household. On the other hand another 10% of the households have coverage of above 15 household per well indicating that a portion of the households in the VDC have relatively less accessibility to the water wells than the others.

Table 4.3: Hand Pump Details/Household/ Population Covered by Surveyed Wells at Devpura Rupaitha Village Development Committee

SN	Well No.	Name of the Nearest HH Owner	Name of VDC /Village/Tole	Total HH Cover	Total Pop ⁿ	Well Depth (ft,bgl)	Well Size inch	Total length of Screen (ft)	Depth of screen Placed (From ..ft to..ft)	Type of material used	Purpose of water use	Well Completion Date	Remarks
1.	HP1	Jibchhaa Mishra	Devpura Rupaitha-6	3	15	125	1.5	5	120 to 125	a. Casing from 0' to 5' -GI b. Rest of all(Casing & Screen) - PVC	Drinking , Bathing	2051	UNICE F Funde d Well
2.	HP2	Sonai Mahato	Devapura Rupaitha -6	7	35	125	1.5	5	120 to 125	Do	Do	2052	
3.	HP3	Mahanta Mahato	Devpura Rupaitha -7	15	105	125	1.5	5	120 to 125	Do	Do	2057	VDC Funde d Well
4.	HP4	Mohamad Mukibul Shekh	Devpura Rupaitha -7	22	154	125	1.5	5	120 to 125	Do	Do	2044	
5.	HP5	Janta Ma. Vidyalya	Devapura Rupaitha -2	1	400	120	1.5	10	110 to 120	Do	Do	2049	
6.	HP6	Jholi Mahara	Devpura Rupaitha - 3	10	70	125	1.5	10	110 to 125	Do	Do	2044	VDC Funde d Well
7.	HP7	Karun Kanta Jha	Devpura Rupaitha - 3	4	36	125	1.5	5	120 to 125	Do	Do	2044	VDC Funde d Well
8.	HP8	Rudra Narayan Jha	Devpura Rupaitha - 2	4	36	115	1.5	10	105 to 115	Do	Do	2052	UNICE F Funde d Well
9.	HP9	Pulkit Shah	Devpura Rupaitha - 1	10	65	125	1.5	10	115 to 125	Do	Do	2052	UNICE F Funde d Well
10.	HP10	Narendra Jha	Devpura Rupaitha - 1	1	5	125	1.5	5	120 to 125	Do	Do	2054	

SN	Well No.	Name of the Nearest HH Owner	Name of VDC /Village/Tole	Total HH Cover	Total Popⁿ	Well Depth (ft,bgl)	Well Size inch	Total length of Screen (ft)	Depth of screen Placed (From ..ft to..ft)	Type of material used	Purpose of water use	Well Completion Date	Remarks
11.	HP11	Ram Kishun Mandal	Devpura Rupaitha – 3	12	66	125	1.5	10	110 to 125	Do	Do	2044	VDC Funded Well
12.	HP12	Masjeed	Devpura Rupaitha – 4	1	60	128	1.5	10	118 to 128	Do	Do	2049	
13.	HP13	Mohmad Husain	Devpura Rupaitha – 5	6	50	125	1.5	5	120 to 125	Do	Do	2054	
14.	HP14	Juge Das	Devpura Rupaitha – 4	5	38	110	1.5	10	100 to 110	Do	Do	2054	
15.	HP15	Magnu Jha	Devpura Rupaitha – 5	1	5	125	1.5	5	120 to 125	Do	Do	2058	
16.	HP16	Ram Bilash Pandit	Devpura Rupaitha – 8	10	68	130	1.5	5	125 to 130	Do	Do	2044	
17.	HP17	Sarswati Nimna Madhyamik Vidyalaya	Devpura Rupaitha – 9	1	450	125	1.5	5	120 to 125	Do	Do	2057	
18.	HP18	Chulahi Kawadi	Devpura Rupaitha – 8	5	36	125	1.5	5	120 to 125	Do	Do	2059	
19.	HP19	Mangal Mahato	Devpura Rupaitha – 9	5	36	95	1.5	5	90 to 95	Do	Do	2058	
20.	HP20	Mangal Thakur	Devpura Rupaitha – 9	6	41	125	1.5	5	120 to 125	Do	Do	2044	

Table 4.4: Ward Wise HH, Population, Number of Tubewell and average HH coverage per hand pump at Devpura Rupaitha VDC

SN	VDC	Ward No	Total HH	Total Population			Total Number of Hand Pump(HP)	Average HH coverage per Hand Pump
				Male	Female	Total		
1.	Devpura Rupaitha	1	64	191	140	331	30	2
2.	Devpura Rupaitha	2	89	428	300	728	45	2
3.	Devpura Rupaitha	3	178	660	640	1300	60	3
4.	Devpura Rupaitha	4	163	613	548	1161	52	3
5.	Devpura Rupaitha	5	107	392	394	786	45	2
6.	Devpura Rupaitha	6	95	399	294	693	55	2
7.	Devpura Rupaitha	7	94	335	309	744	48	2
8.	Devpura Rupaitha	8	172	576	464	1040	40	4
9.	Devpura Rupaitha	9	162	590	548	1138	52	3
			1124	4184	3637	7921	427	3

Source: VDC office, Devpura Rupaitha, 2058/059

Table 4.5: Groundwater Quality / Sanitary Inspection of Surveyed well at Devpura Rupaitha VDC

SN	Well No.	Name of the Nearest HH Owner	Name of VDC /Village/Tole	Observed Iron Value (mg/l)	Observed Arsenic Value (mg/l)	Fecal Coliform Grade	Sanitary Inspection Risk Score	Remarks
1.	HP1	Jibchhaa Mishra	Devpura Rupaitha-6	0.21	N.D.<0.01	D	Low	
2.	HP2	Sonai Mahato	Devapura Rupaitha -6	0.37	N.D.<0.01	C	High	
3.	HP3	Mahanta Mahato	Devpura Rupaitha -7	0.36	N.D.<0.01	A	Intermediate	
4.	HP4	Mohamad Mukibul Shekh	Devpura Rupaitha -7	0.25	N.D.<0.01	B	High	
5.	HP5	Janta Ma. Vidyalaya	Devapura Rupaitha -2	0.16	0.02	A	Low	School
6.	HP6	Jholi Mahara	Devpura Rupaitha - 3	0.21	N.D.<0.01	C	Intermediate	
7.	HP7	Karun Kanta Jha	Devpura Rupaitha - 3	0.29	N.D.<0.01	A	Low	
8.	HP8	Rudra Narayan Jha	Devpura Rupaitha - 2	0.13	N.D.<0.01	A	High	
9.	HP9	Pulkit Shah	Devpura Rupaitha - 1	0.20	N.D.<0.01	D	Intermediate	
10.	HP10	Narendra Jha	Devpura Rupaitha - 1	0.16	N.D.<0.01	A	Intermediate	
11.	HP11	Ram Kishun Mandal	Devpura Rupaitha - 3	0.12	N.D.<0.01	A	Low	
12.	HP12	Masjeed	Devpura Rupaitha - 4	0.23	N.D.<0.01	D	Low	

13.	HP13	Mohmad Husain	Devpura Rupaitha – 5	0.28	N.D.<0.01	D	Intermediate	
14.	HP14	Juge Das	Devpura Rupaitha – 4	0.20	N.D.<0.01	D	Intermediate	

SN	Well No.	Name of the Nearest HH Owner	Name of VDC /Village/Tole	Observed Iron Value (mg/l)	Observed Arsenic Value (mg/l)	Fecal Coliform Grade	Sanitary Inspection Risk Score	Remarks
15.	HP15	Magnu Jha	Devpura Rupaitha – 5	0.25	N.D.<0.01	A	High	
16.	HP16	Ram Bilash Pandit	Devpura Rupaitha – 8	0.45	N.D.<0.01	A	Intermediate	
17.	HP17	Sarswati Nimna Madhyamik Vidyalaya	Devpura Rupaitha – 9	0.08	N.D.<0.01	A	Low	School
18.	HP18	Chulahi Kawadi	Devpura Rupaitha – 8	N.D.<0.01	N.D.<0.01	A	Intermediate	
19.	HP19	Mangal Mahato	Devpura Rupaitha – 9	N.D.<0.01	N.D.<0.01	D	High	
20.	HP20	Mangal Thakur	Devpura Rupaitha – 9	0.16	N.D.<0.01	A	High	

1. Fecal Coliform Grading

<u>FC Count/100 ml</u>	<u>Grade</u>	<u>Risk</u>
0	A	No Risk
1-10	B	Low Risk
11-100	C	High Risk
101-1,000	D	Very High Risk

2. Sanitary Risk Score

<u>Risk Score</u>	<u>Risk</u>
0 - 2	Low Risk
3 - 5	Intermediate Risk
6 - 8	High Risk
9 - 12	Very High Risk

Only 15% of the wells have iron concentration above WHO prescribed limit of 0.3 mg/l. Arsenic is not detected and is below WHO prescribed value of 0.01mg/l except in one well owned by a Government School. The observed value is 0.02 mg/l, which is within the limit of 0.05 mg/l recommended by Department of Water Supply, and Sewerage.

Micro-biologically, 45% of the surveyed wells shows fecal contamination and are unsafe for drinking water purpose.

Rest of the other tested parameters is within the WHO prescribed limits (for details refer Annex B 2).

Water quality analysis indicate that 55% of the wells have no fecal contamination, while sanitary inspection of the surveyed wells indicate that 30% of wells have high contamination risks, and 40% of the wells have intermediate contamination risks (Table 4.4, for details of well refer Annex A 2). Combined risk assessment analysis of the surveyed wells in the VDC indicate that 40% of the wells require urgent action and 30% wells require intermediate actions to ensure good water quality supply (refer Annex C).

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the current survey results following recommendations are proposed for action.

5.1 Construction of New wells to Lessen Hardships

Considering the household coverage per well, the numbers of well in the Janakpur Municipality ward No. 14 are far less than desired. A long queue often involving misgivings is observed in the morning and evening peak hours among the water using communities. Construction of new wells at appropriate locations within the ward to bring household coverage per well to 10 household is recommended.

In the Devpura Rupaitha VDC, average household coverage per well is less than 3. However, there are areas where one well covers more than 15 to 22 households. In such areas, to lessen the hardship few new wells are recommended for construction.

5.2 Upgrading the Sanitary Conditions of the Wells

Nearly 60% of the wells in Janakpur Municipality Ward 14, and 30% of wells in Devpura Rupaitiya VDC have poor sanitary conditions. Sanitary risk scoring shows high contamination risks calling for urgent action to safeguard the water quality.

Similarly 40% of the wells in Janakpur Municipality Ward 14, and 40% of wells in Devpura Rupaitiya VDC have moderate sanitary conditions. Sanitary risk scoring shows intermediate contamination risks calling for intermediate action to safeguard the water quality. Only 30% of wells in the VDC have low contamination risks.

To upgrade the sanitary conditions of the wells following actions are recommended.

- Construction of 2*2 m concrete platform around the wells in order to reduce the seepage of wastewater into the well through the well and ground interface.
- Construction of drainage to avoid ponding of wastewater in and around the well and safely discharge the waste water away from the well location.

5.3 Water Treatment

Nearly 50% of the wells shows iron concentration above WHO prescribed limit. Though the concentration levels are below health threshold but are objectionable aesthetically. To improve the water quality, treatment of water prior to use is essential. This option at the well level is costly and need to be consulted with the local community before any further action.

One well in Devpura Rupaita VDC shows higher concentration of Arsenic than the WHO prescribed limit. Further analysis of the well water is recommended. If the water is found to contain Arsenic above WHO prescribed value, The well should be abandoned and alternative water supply arrangement is recommended. Treatment of this well water is possible, but at rural area, maintenance of the treatment unit is rather difficult and hence is not recommended.

Nearly 40% of the surveyed wells shows fecal contamination. And over 75% of the wells show fecal contamination potentials. In the above context, the water from most of these wells are not safe for direct drinking. Disinfecting of microbes at the well level is costly and may not be within the affordable range of the user communities. Regular cleaning works and sanitary upgrading works in and within the well location will reduce risks of fecal contamination, however cent per cent safety is difficult to ensure. Hence, it is suggested to recommend the community to use water for drinking purpose only after boiling and cooling or after applying solar disinfecting technique at household level.

5.4 Public Awareness

Fecal contamination of well water is related to the sanitary habits of the local communities. Public awareness programs to make people understand how they contaminate their water sources? and how they themselves invite water related diseases and sufferings? need to be regularly conducted at the community level. Such programs should also incorporate community actions such as regular cleaning of well areas, draining of well locations, construction of pit latrines or septic tanks at certain distance from well locations, prohibition of open defecation around the well locations, prohibition of solid waste disposal close to the well locations etc.

Teachings on hygienic sanitary practices such as washing of hands before eating, after toilet visits, collection of water in clean jars, covering of stored water containers, use of clean utensils for water serving etc. need to be constantly given. Habits are very difficult to change and will require long persuasion through public awareness programs.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Janakpur Municipality Ward No: 14(Mushahari Tole)
 Type of Water Source : Groundwater
 Date of Visit : 2059/8/1
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Mushahari Tole

Well No: HP1

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 7/10

Contamination risk score: 9-12=Very high; 6-8 high; ✓
 3-5= Intermediate; 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Agriculture and settlement are major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Janakpur Municipality Ward No: 14(Chamartoli)
 Type of Water Source : Groundwater
 Date of Visit : 2059/8/1
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Kheru Ram

Well No: HP2

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 7/10

Contamination risk score: 9-12=Very high; 6-8 high; ✓
 3-5= Intermediate; 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Janakpur Municipality Ward No: 14
 Type of Water Source : Groundwater
 Date of Visit : 2059/8/1
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Radha Library

Well No: HP3

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 7/10

Contamination risk score: 9-12=Very high; 6-8 high; ✓
 3-5= Intermediate; 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

a. Dominant Land Use pattern around well area

Agriculture is major dominant land use around the Hand Pump

b. Major Activities around the well area

Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.

c. Existing Physical Condition

Hand pump site is safe from flood hazards.

d. Topographical features:

Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Janakpur Municipality Ward No: 14(Rajaul)
 Type of Water Source : Groundwater
 Date of Visit : 2059/8/1
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Moti Mahara

Well No: HP4

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?		✓
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 2/10

Contamination risk score: 9-12=Very high; 6-8 high;
3-5= Intermediate; 0-2= low ✓

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Janakpur Municipality Ward No: 14(Belhi-Rajaul)
 Type of Water Source : Groundwater
 Date of Visit : 2059/8/1
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Janta Ni.Ma. Vidyalaya, Belhi-Rajaul

Well No: **HP5**

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?		✓
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 4/10

Contamination risk score: 9-12=Very high; 6-8 high;
 3-5= Intermediate; ✓ 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

a. Dominant Land Use pattern around well area

Settlement is major dominant land use around the Hand Pump

b. Major Activities around the well area

Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.

c. Existing Physical Condition

Hand pump site is safe from flood hazards.

d. Topographical features:

Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 6
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Jibchha Jha

Well No: HP1

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?		✓
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 1/10

Contamination risk score:

9-12=Very high; 6-8 high;

3-5= Intermediate; 0-2= low ✓

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 6
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Sonai Mahato

Well No: HP2

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 6/10

Contamination risk score: 9-12=Very high; 6-8 high; ✓
 3-5= Intermediate; 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaiatha Ward No: 7
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Mahanta Mahato

Well No: HP3

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?		✓
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 3/10

Contamination risk score:

9-12=Very high; 6-8 high;

3-5= Intermediate; ✓ 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 7
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Mohamad Mukibul Shekh

Well No: HP4

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 7/10

Contamination risk score: 9-12=Very high; 6-8 high; ✓
 3-5= Intermediate; 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 2
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Sonai Mahato

Well No: HP5

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?		✓
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 1/10

Contamination risk score: 9-12=Very high; 6-8 high;
 3-5= Intermediate; 0-2= low ✓

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Agriculture and settlement are major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 3
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Jholi Mahara

Well No: HP6

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 4/10

Contamination risk score: 9-12=Very high; 6-8 high;
3-5= Intermediate; ✓ 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 3
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Karun Kanta Jha

Well No: HP7

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?		✓
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 1/10

Contamination risk score: 9-12=Very high; 6-8 high;
 3-5= Intermediate; 0-2= low ✓

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaittha Ward No: 2
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Rudra Narayan Jha

Well No: HP8

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 6/10

Contamination risk score: 9-12=Very high; 6-8 high; ✓
 3-5= Intermediate; 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaiitha Ward No: 1
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Pulkit Shah

Well No: **HP9**

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 5/10

Contamination risk score: 9-12=Very high; 6-8 high;
 3-5= Intermediate; ✓ 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaiitha Ward No: 1
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Narendra Jha

Well No: **HP10**

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?		✓
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 4/10

Contamination risk score: 9-12=Very high; 6-8 high;
 3-5= Intermediate; ✓ 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 3
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Ram Kishun Mandal

Well No: HP11

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?		✓
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 1/10

Contamination risk score: 9-12=Very high; 6-8 high;
3-5= Intermediate; 0-2= low ✓

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 4
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Masjeed/Madrassa(Muslim School)

Well No: HP12

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?		✓
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?		✓
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 10/10

Contamination risk score: 9-12=Very high; 6-8 high;
 3-5= Intermediate; 0-2= low ✓

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: **SHALLOW AND DEEP HAND PUMPS (TUBE WELL)**

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaiatha Ward No: 5
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/29
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Mohmad Husain

Well No: **HP13**

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?	✓	
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?		✓
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 4/10

Contamination risk score:

9-12=Very high; 6-8 high;

3-5= Intermediate; ✓ 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 4
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/30
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Juge Das

Well No: **HP14**

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?		✓
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?		✓
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 3/10

Contamination risk score: 9-12=Very high; 6-8 high;
 3-5= Intermediate; ✓ 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Agriculture and settlement are major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 5
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/30
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Magnu Jha

Well No: HP15

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?	✓	
2.	is the nearest latrine on higher ground than the handpump?	✓	
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?		✓
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 6/10

Contamination risk score: 9-12=Very high; 6-8 high; ✓
 3-5= Intermediate; 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 8
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/30
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Ram Bilash Pandit

Well No: **HP16**

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?		✓
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 3/10

Contamination risk score: 9-12=Very high; 6-8 high;
 3-5= Intermediate; ✓ 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Agriculture and settlement are major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:

Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaiitha Ward No: 9
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/30
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Sarswati Ni.Ma.Vidyalaya

Well No: HP17

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)		✓
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?		✓
6.	Is there inadequate fencing around the installation which would allow animals in?		✓
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?		✓
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 2/10

Contamination risk score: 9-12=Very high; 6-8 high;
 3-5= Intermediate; 0-2= low ✓

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition
Hand pump site is safe from flood hazards.

- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
District : Dhanusha
Name of VDC : Devpura Rupaitha Ward No: 9
Type of Water Source : Groundwater
Date of Visit : 2059/7/30
Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
Nearest House Owner : Chulahi Kawadi

Well No: **HP18**

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?		✓
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 5/10

Contamination risk score: 9-12=Very high; 6-8 high;
3-5= Intermediate; ✓ 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Agriculture and settlement are major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.
- c. Existing Physical Condition

- Hand pump site is safe from flood hazards.*
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 8
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/30
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Mangal Mahato

Well No: **HP19**

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?		✓
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 6/10

Contamination risk score: 9-12=Very high; 6-8 high; ✓
3-5= Intermediate; 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area
Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.

- c. Existing Physical Condition
Hand pump site is safe from flood hazards.
- d. Topographical features:
Topography of the Hand Pump site is plain.

**SANITARY SURVEY FORM FOR THE ASSESSMENT OF RISKS OF
CONTAMINATION OF DRINKING OF WATER SOURCES**

Type of Facility: SHALLOW AND DEEP HAND PUMPS (TUBE WELL)

I GENERAL INFORMATION

Name of Water Supply Project :
 District : Dhanusha
 Name of VDC : Devpura Rupaitha Ward No: 9
 Type of Water Source : Groundwater
 Date of Visit : 2059/7/30
 Is Water Sample Taken? : Yes Fecal Coliform Grade: -----
 Nearest House Owner : Mangal Thakur

Well No: **HP20**

II SPECIFIC DIAGNOSTIC INFORMATION FOR ASSESSMENT

SN	Description	Risk	
		Yes	No
1.	Is there a latrine within 10 m of handpump?		✓
2.	is the nearest latrine on higher ground than the handpump?		✓
3.	Is there any other source of pollution within 10 m of the well? (e.g. animal excreta, rubbish, surface water, moss growth)	✓	
4.	Is there any ponding or stagnant water within 2 m of the cement floor of handpump?	✓	
5.	Is the handpump drainage channel faulty? Is it broken, Permitting ponding? does it need cleaning?	✓	
6.	Is there inadequate fencing around the installation which would allow animals in?	✓	
7.	Is the cement floor less than 1 m radius all around the handpump?	✓	
8.	Is there any ponding on the cement floor around the handpump?	✓	
9.	Are there any cracks on the cement floor around the handpump?	✓	
10.	Is the handpump loose at the point of attachment to the base? (Which could permit water to enter the casing)		✓

Total score (Yes) of risks: 7/10

Contamination risk score: 9-12=Very high; 6-8 high; ✓
 3-5= Intermediate; 0-2= low

III GENERAL DESCRIPTION OF THE SOURCE AREA (PUT TICK MARKS WHEREVER APPLICABLE)

- a. Dominant Land Use pattern around well area
Settlement is major dominant land use around the Hand Pump
- b. Major Activities around the well area

Insanitary activities such as haphazard pits and toilets, open defecation, animal rearing, dyeing/washing around the well are not present.

c. Existing Physical Condition

Hand pump site is safe from flood hazards.

d. Topographical features:

Topography of the Hand Pump site is plain.