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REPORT ON

STUDY OF GROUNDWATER STATUS OF LUMBINI SANSKRITIK MUNICIPALITY



VOLUME I

MAIN REPORT

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ABBREVIATIONS

DOWRI	: Department of Water Resources and Irrigation
DTW	: Deep Tube Wells
MCM	: Million Cubic Meters
STW	: Shallow Tube Wells
SWL	: Static Water Level
TOR	: Terms of Reference
WUG	: Water User Group
WUA	: Water Users Association
GIS	: Geographical Information System
VES	: Vertical Electrical Sounding
HP	: Hand pump
DW	: Dugwell

CHAPTER I

INTRODUCTION

1.1 INTRODUCTION

Groundwater resource is an important natural resource of the country. In Nepal, the predominately used water sources are either surface water or groundwater. In Terai region, where more than 53% of total population resides (CBS, 2021). Since the last decade, there is a growing problem of drinking water for the peoples living in the hills and the mountains and the numerous river valleys in Nepal. Various capacity springs from the mountains are collectively used in water supply scheme for places in low lying areas. Almost all the peoples in Terai rely on groundwater for their domestic use whereas the people from the hills and the mountains depend on natural groundwater discharges through springs and seepages. Since the last few decades groundwater irrigation practices are common to the people in the Terai region. It is crucial for the livelihoods and food security of millions of people living in those areas.

The quantity and quality of the water vary significantly in phreatic aquifer as the ground water level fluctuate along with the contamination of percolated surface water. In the case of confined aquifer, quality and quantity of available water remains almost constant for the same deep tube wells as compared to that in phreatic aquifer. Moreover groundwater, being dynamic, adjust continually with changes in ground water withdrawal, recharge, land use and climate change. Thus, water level measurement of existing deep tubewell systems provide essential baseline data to explore the available resources, which in long term will be helpful to evaluate and monitor the changes for effective groundwater management and protection.

Groundwater exploration has been underway in Nepal since 1960 A.D., with help from USAID, the World Bank, and the Nepalese government. There are various semi-confined to confined aquifers in the Terai and inner Terai valley's thick alluvial deposit. Terai's hydro-geological analysis suggests that it has an abundance of groundwater resources. According to one study, about 12 BCM (billion cubic meters) of annual rechargeable groundwater resource is available in Nepal's Terai area, which is adequate for drinking water supply and irrigation.

According to the news on various media last month, The level of ground water in Terai region has been declining day by day which triggers water shortage in Terai for example Birgunj and Danusa District, people might have to struggle with drinking water shortages in the days ahead. There is urgency of comprehensive study of groundwater in the Terai.

In response to the needs of Lumbini Sanskritik Municipality, there was a necessity to compile information on potential groundwater zones (depth, spatial variation, quantity, and quality) from various studies and field investigations to enhance groundwater management and utilization. It outlines the findings of our study to address the rural municipality's needs, focusing on the socio-economic survey and groundwater availability in the region. The findings of the study also serve as the foundation for informed decision-making and the implementation of effective management strategies. Furthermore, the data collected can aid in the development of groundwater modeling and forecasting tools, which are essential for anticipating and mitigating the impacts of climate change, urbanization, and other emerging challenges.

1.2 PROJECT BACKGROUND

The Constitution of Nepal has enshrined access to safe drinking water as a fundamental right of every citizen. Meanwhile, Nepal is committed to Sustainable Development Goals (2016- 2030). The Sustainable Development Goal 6 aims to ensure equitable access to safe drinking water for all. This indicates an urgent need of sustainable water supply management, which requires in-depth analysis, planning and forecasting of available water resources. The quantitative and qualitative study of the existing water resources further support the efficient planning, budgeting, preparation, management and implementation of water supply projects sustainably.

The Department of Water Supply and Sewerage Management (DWSSM) used to be the sole lead agency in WASH sector carrying out the responsibility of planning, implementation, operation, repair and maintenance of water supply and sanitation systems throughout the country. But after the promulgation of the new constitution with the concept of three tiers of government, local government also are responsible for providing easy access to safe drinking water to eliminate water borne diseases by improving the water quality in existing water supply schemes and implementing new water supply projects.

In Nepal, the predominately used water sources are either surface water or groundwater. In Terai region, where more than 53% of total population resides (CBS, 2021), daily domestic water supply is primarily (about 90%) through the extraction of groundwater from shallow and deep

tubewells. Terai plain is formed by alluvium deposits of different thickness with abundance of ground water in both phreatic and confined aquifers. The quantity and quality of the water vary significantly in phreatic aquifer as the ground water level fluctuate along with the contamination of percolated surface water. In the case of confined aquifer, quality and quantity of available water remains almost constant for the same deep tube wells as compared to that in phreatic aquifer. Moreover groundwater, being dynamic, adjust continually with changes in ground water withdrawal, recharge, land use and climate change. Thus, water level measurement of existing deep tubewell systems provide essential baseline data to explore the available resources, which in long term will be helpful to evaluate and monitor the changes for effective groundwater management and protection.

Arsenic, iron, manganese, hardness, turbidity and e-coli are the main water quality issues generally found in Terai region. Exposure to arsenic in drinking water for prolong time may lead to chronic arsenic poisoning. Removal of impurities like arsenic from drinking water requires modern water treatment mechanism demanding high capital as well as O&M cost. Excess iron and manganese give unpleasant taste and colour in water. Hardness in excess in water possess risk of economic losses by lime encrustation in pipeline, clog filter media and boilers. Turbidity is due to various organic and inorganic colloidal particles which possesses health hazard by itself and also acts as the favorable environment for pathogens. E-coli in water indicates recent fecal contaminations which signifies the probable occurrence of pathogens in water.

The blanket study (2003-2008) on Arsenic conducted by GoN in close partnership with various international development agencies and nongovernmental organizations covering 11,01,536 wells in twenty Terai districts of Nepal, revealed that approximately 1.73% of tube wells are exposed by arsenic above 50 ppb above the National Drinking Water Quality Standard, while approximately 5.37% of tube wells contain 11-50 ppb of arsenic concentration. The distribution of tube wells is not uniform in all the districts and many of these sources especially shallow tube wells are arsenic contaminated. Geology and geomorphology have main control over the occurrence of arsenic in groundwater in the Terai (Kansakar, 2004). Shallow aquifers are more susceptible to arsenic contamination, whereas deep aquifers have been found to be generally free from arsenic. But deep tube wells may become contaminated if tube well construction practice is not proper. Arsenic-bearing shallow groundwater may get mixed up with the deep aquifer water in the multiple-screen tube wells and also through gravel pack material in the tube well annular spaces (Bisht et al., 2004). Thus, there is a clear need for groundwater quality management in

order that the clean aquifers are protected from contamination as well as to search for safe shallower aquifers in the Terai and the known groundwater quality problems are adequately addressed.

Universally, drinking water use receives precedence over all other uses of any water resource. The Water Resources Act (1992) of Nepal also provides the first priority for drinking water use. But, without suitable water quality, such legal provisions have little meaning, because people will not drink low quality water as long as they have an alternative. Therefore, proper utilization depends much on the quality management.

The level of ground water in Terai region has been declining day by day which triggers water shortage in Terai. With natural water sources drying up in many parts of Terai, people might have to struggle with drinking water shortages in the days ahead. Tube wells, taps, boring wells and ponds, which in the past have been reliable drinking water sources are drying up fast. However, there has been little systematic study of ground water within the Terai region.

In this context, Lumbini Saskritik Municipality felt a need to collate the information on potential groundwater prospective zones (depth of occurrence, spatial variation, quantity and water quality) available from the various studies along with field studies for strengthening ground water management and utilization. This TOR is prepared to investigate the groundwater resources in the municipality on the basis of water quality, quantity and studies on existing deep tubewells.

1.3 OBJECTIVE AND SCOPE OF THE STUDY

1.3.1 OBJECTIVE OF THE STUDY

The main objective of this study is to carried out ground water potential study of the area. To prepare a spatial GIS database of existing DTW, STW and Coordinate with Groundwater related agencies for existing data. The main objective is to trace groundwater level and its availability in terms of quality and quantity so as to outline the potential availability of safe and abundant ground water.

1.3.2 SCOPE OF THE STUDY

The consultant will carry out all required assessment in field & site. The consultant will be responsible for study, accuracy, interpretation, analysis of all data received including conclusion and recommendations. The scope of work to be carried out by the consultant will include as follows:

- Review of reports, if any, collection of relevant information, plan and program of the proposed areas/districts.
- Previous researches or available latest data on geological, hydrological, meteorological and groundwater condition of the areas should also be studied and analyzed.
- Carry out socio-economic survey of the project area (secondary data).
- Identify the hydrogeological condition, such as groundwater level and groundwater flow mechanism of the study area based on previous reports/data of Electrical Resistivity Tomography (ERT)/ Vertical Electrical Sounding (VES).
- Carry out frequent discussions with the municipality on working methodology so as to complete the assignment in time.
- Record spatial location of the studied deep tubewells in appropriate projection system as far as practicable (secondary data).
- Conduct water quantity measurement (liter per second) and water quality testing of water sample at outlet of deep tubewells.
- Prepare inventory of water quality such as pH, iron, manganese, arsenic, turbidity

1.4 APPROACH AND METHODOLOGY

To carry out the study and to arrive at logical conclusion, the methodology is based on the terms of references (TOR) furnished by the employer. The sequential methodology adopted for various phases of the study is as the following (**Error! Reference source not found.**).

1.4.1 DESK STUDY

During this phase, all relevant accessible papers were studied to acquire a better understanding of the hydrogeology of the area. To prepare for the field, a check list and organized questionnaires were created. Finally, at the conclusion of the desk research phase, an Inception Report was submitted, which detailed the intended actions to be carried out to complete the project.

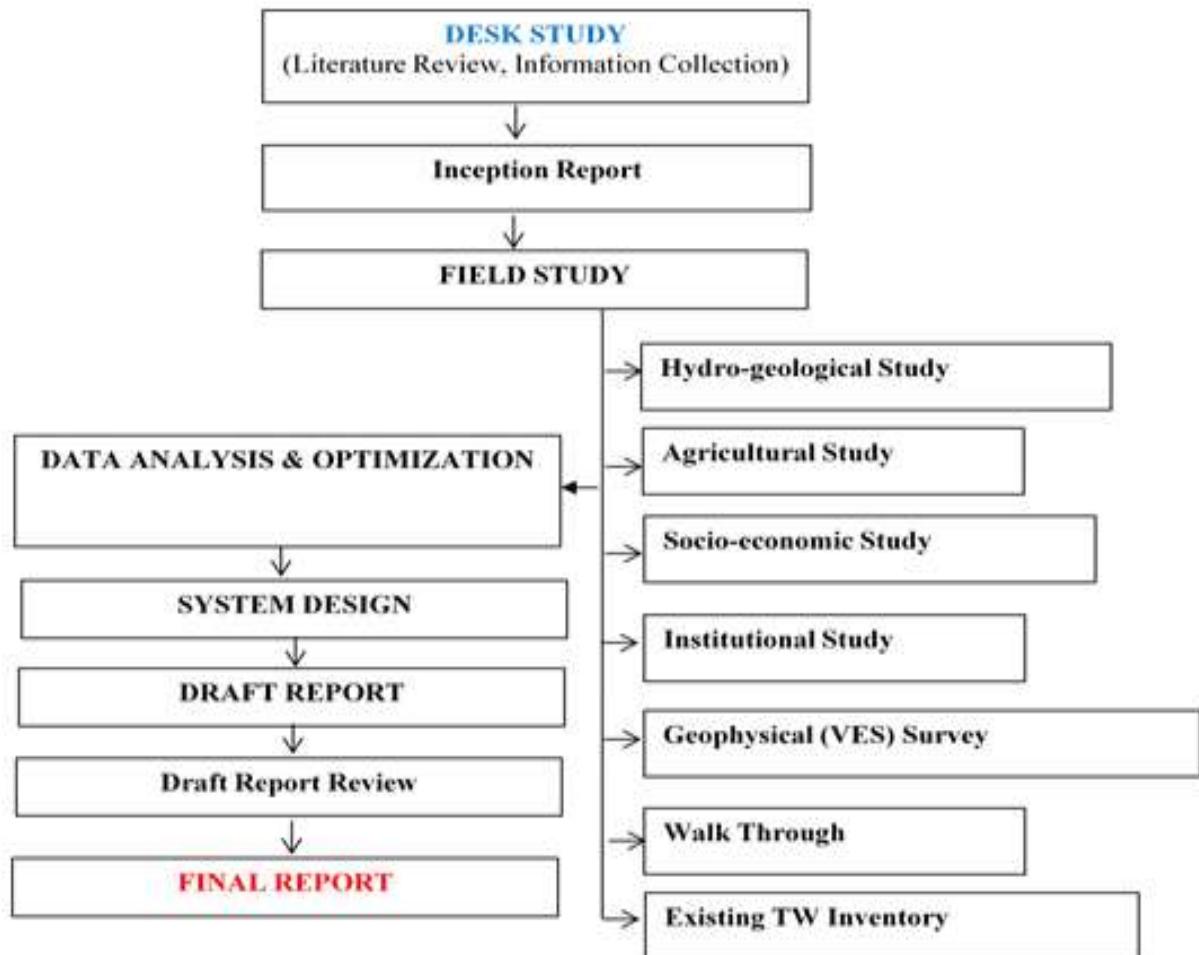


Figure 1 Work flow and Methodology of the study

1.4.2 FIELD VISIT AND DISCUSSION WITH STAKEHOLDER

A field excursion to the Study area followed the desk study. Our expert team, which included a Water Resource expert (hydrogeologist), Water Supply and Sanitary Engineer, a sociologist, GIS Expert, the visit to the field and met with professional staff such as the office in charge, a hydrogeologist, an engineer, a social organizer, and others. During the meeting, a field visit modality was developed with the office staff's input.

1.4.3 DATA ANALYSIS AND RESULT DISCUSSION

The collected field data and information were examined to assess the state of the DTW irrigation systems. Particularly, data collected has been processed and evaluated in connection to:

- Status of groundwater Potential in the study area.
- Institution arrangement and relative strength and weakness for sustainability of the irrigation system
- Financial and Socio-economic status of the people within the study area.
- DTW System Design and Calculation
- Geo-physical Data collection from secondary source.

1.4.4 REPORT PREPARATION

The draft report was created after analyzing field data and information and consulting with numerous stakeholders, including project authorities. After presenting a draft report, it was evaluated by the employer, and eventually, a final report was written and delivered to the employer within the time frame specified. The following issues are addressed in the final report:

- Groundwater potential within the district
- Geophysical data simulation curve recommending the subsurface lithological description.
- Geology and Hydrogeology of the project area
- Water quality of the area.

CHAPTER II

PROJECT AREA

2.1 LOCATION AND ACCESSIBILITY OF THE STUDY AREA

Lumbini Cultural Municipality is located in Rupandehi District under Lumbini Province of Nepal. Geographically, Lumbini, located at 83 degrees 13 minutes to 83 degrees 20 minutes east longitude and 27 degrees 23 minutes 40 seconds to 27 degrees 32 minutes 30 seconds north latitude, is a major tourist area of the cultural Lumbini province. As the birthplace of Siddhartha Gautama Buddha, the municipality has been named as Lumbini Sanskritik Municipality. Covering about 112.21 square km, Gaidahwa rural municipality is located in the north of this municipality, Kapilvastu district is located in the west, Sammarimai rural municipality and India are in the south and Kothimai and Mayadevi rural municipalities are in the east. Lumbini Sanskritik Municipality was declared as municipality on 15 Baisakh 2071. When the municipality was announced, Bhagwanpur, Lumbini Adarsh, Tenuhwa, Ekala, Khudabagar, Madhuvani and Masina VDC, were a total of 18 wards included, and on the date 2072 Poush 21, Aama VDC was also included to conclude the ward of 13. A total of 185 educational institutions are operating in this municipality, including 11 secondary level, 50 basic level and 144 others. Among the newly formed municipalities in Rupandehi district, Lumbini Sanskritik Municipality is one of the municipalities that has a lot of potential for development. In addition to this, conscious political parties and motivated citizens are also the sources of strong and sustainable development of this municipality. People of different castes and religions live in this municipality. According to the statistics of National Census 2078, the total population is 87,383, of which the largest number are Muslims with 29,461 (33.7%), followed by Yadavs with 11,648 (13.3%) and third with 7,095 (8.1%) Lodhas) have a residence. There are 13 wards in this municipality. Agriculture has the largest share in the average family income, while foreign employment is also one of the main sources of income for local residents. The residents who are looking for an alternative to the traditional system of agriculture have started enjoying the modern lifestyle. Local people are going abroad for employment and study. There are a number of educational institutions in this city that provide basic to higher education. In addition to local students, other neighboring rural municipalities also come to study in the educational institutions of this city. Although most of the houses are electrified, some of the citizens who are in the

marginalized sections are not able to reach the access of electricity consumption. Until now, due to lack of public representatives in local bodies there was difficulty in implementing planned development activities and in necessary financial management, the expected development of this municipal area was not possible. Various festivals are celebrated in this area where people of different communities and castes live. Dashain, Tihar, Maghi, Holi, Gaura, Krishna Janmashtami, Bakraid, Aitabari, Chhath Parva, Buddha Jayanti, etc. are the major festivals here. The sediment in the study region is alluvial in origin. The project region is a fertile terrain that can support a wide range of crops, including rice, wheat, maize, legumes, and in-season and off-season vegetables. A consistent supply of irrigation water would boost output significantly, improving farmers' economic status in this area. It was quite difficult to obtain water for irrigation prior to the development of electricity in this area. However, when power became available around two decades ago, farmers were able to pump groundwater for small-scale irrigation around their homes. Because the water table is above the suction limit of the centrifugal pump, the installation of a DTW irrigation system in this region will undoubtedly help farmers boost their output.

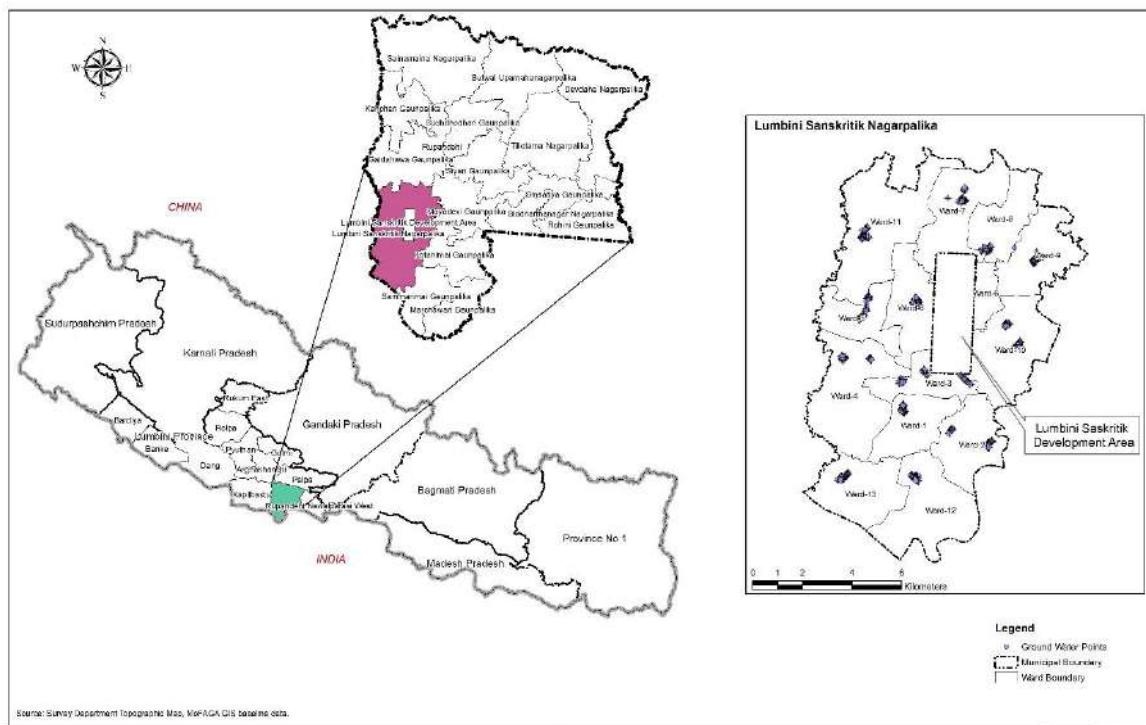


Figure 2: Location map of Study Area

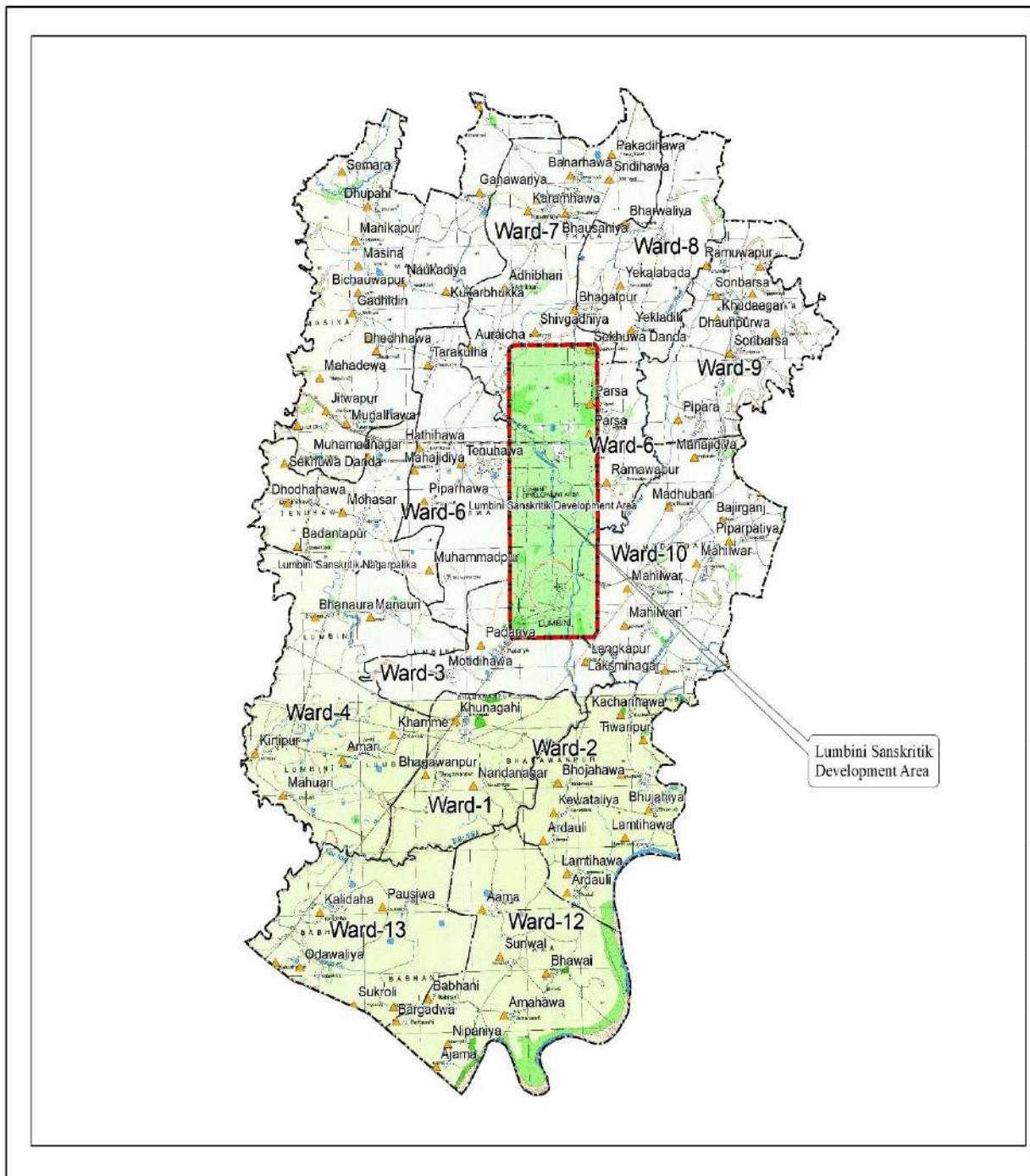


Figure 3 : Topographical map of Study Area

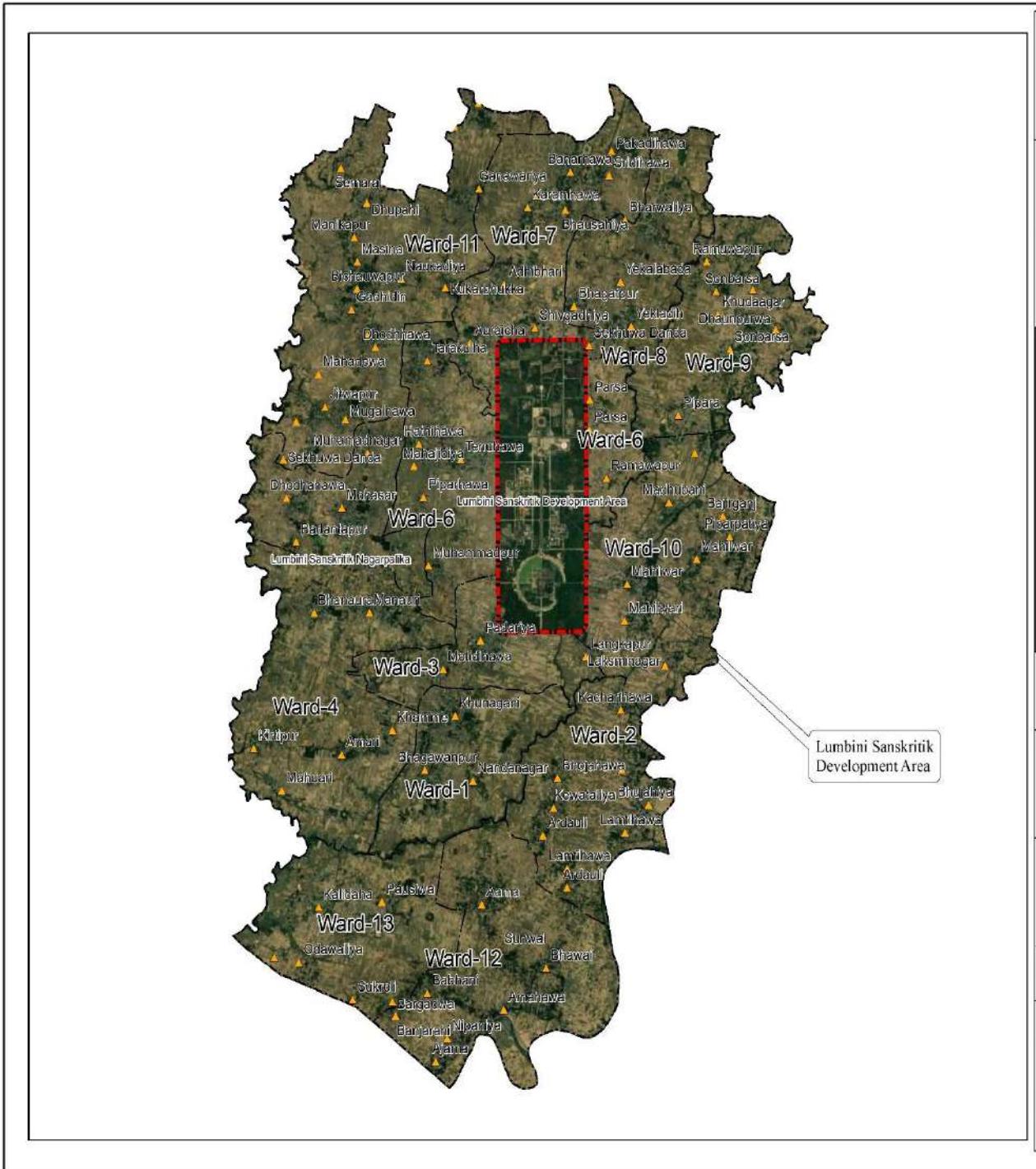


Figure 4 : Satellite Map of the Project Area

2.2 CLIMATE AND TOPOGRAPHY

The climate of the study area is tropical during the summer and sub-tropical during the winter. June to September is the wet season and rests are the dry seasons. More than 80% of the rainfall occurs within this wet season. The average annual rainfall is about 133.67 based on below mentioned stations. The hottest months are May and June while coldest months are December and January. The average maximum temperature is 30.2⁰ C while minimum is about 15.5⁰ C. The maximum summer temperature can reach up to 36.5⁰C and minimum temperature in winter can drop down to 8.3⁰C.

Table 1 : Station Information

T_Mean	Longitude [°]	Latitude [°]	Altitude [m]	Distance [km]	Direction	Direction	Station Name
1	83.43	27.45	100	16.9	112	E	PAKLIHAWA
2	83.45	27.51	109	17.7	89	E	BHAIRAWA-AIRPORT
3	83.46	27.53	120	18.8	82	E	BHAIRAWA-AGRI
4	83.06	27.55	94	21.4	283	W	TAULIHAWA
5	83.46	27.7	205	28.5	41	NE	BUTWAL
6	83.01	27.75	120	37.4	317	NW	BIRPUR
7	83.15	27.9	1708	45.4	345	N	KHANCHIKOT
8	83.53	27.86	1067	46.9	33	NE	TANSEN
9	83.4	27.93	442	48.8	15	N	RIDI-BAZAR
10	82.76	27.66	80	53.2	289	W	BHAGWANPUR

Table 2 : Temperature Datas in the Project Area

Months	Temp_Mean	Temp_Max	Temp_Min
January	15.5	22.6	8.3
February	17.7	25.7	10
March	22.7	31.3	14.3
April	28.2	36.2	20.3
May	30.2	36.5	24
June	30	34.7	25.2
July	28.7	32.4	25.2
August	28.5	32	24.8
September	27.7	31.6	23.7
October	26.1	31	21.2
November	20.7	28	13.6
December	16.2	23.7	8.8
Mean	24.35	30.48	18.28

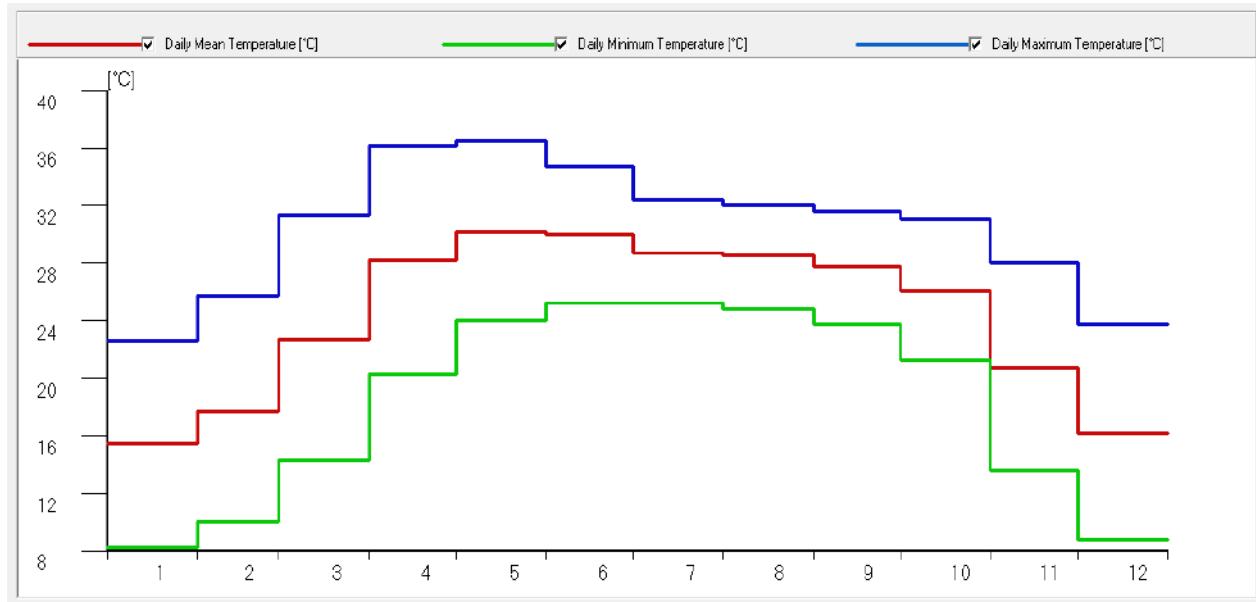


Figure 5 : Graphical Representation of Temperature in Project Area

Table 3 : Precipitation Data in the Project Area

Prec	Best Estimate	Low Estimate	High Estimate	Standard Error	Bias
	[mm]	[mm]	[mm]	[mm]	[mm]
January	19	5.83	32.17	13.17	-3.44
February	9	0	21.61	12.61	-2.22
March	11	0	23.21	12.21	-3.33
April	15	1.95	28.05	13.05	-3.78
May	30	12.38	47.62	17.62	-6.11
June	295	219.49	370.51	75.51	-28
July	476	353.43	598.57	122.57	-49.44
August	419	303.74	534.26	115.26	-49.22
September	231	162.78	299.22	68.22	-27.89
October	92	66.11	117.89	25.89	-9.89
November	3	0	7.81	4.81	-1
December	4	0	8.19	4.19	-0.33
Mean	133.67	93.24	174.09	40.43	-15.39

Table 4 : Potential Evapo Transpiration (PET) Data in the Project Area

PET	Best Estimate	Low Estimate	High Estimate	Standard Error	Bias
	[mm]	[mm]	[mm]	[mm]	[mm]
January	65	51.97	78.03	13.03	-1.29
February	86.8	67.5	106.1	19.3	-0.9
March	145.6	113.39	177.81	32.21	-1.6
April	200.9	161.72	240.08	39.18	-0.42
May	220.1	178.63	261.57	41.47	0.02
June	174	138.26	209.74	35.74	-0.12
July	164.3	131.04	197.56	33.26	0.21
August	148.8	118.47	179.13	30.33	1.28
September	123	100.29	145.71	22.71	-0.37
October	117.8	99.94	135.66	17.86	0.56
November	78	66.6	89.4	11.4	0.41
December	55.7	46.86	64.54	8.84	-0.76
Mean	131.67	106.22	157.11	25.44	-0.25

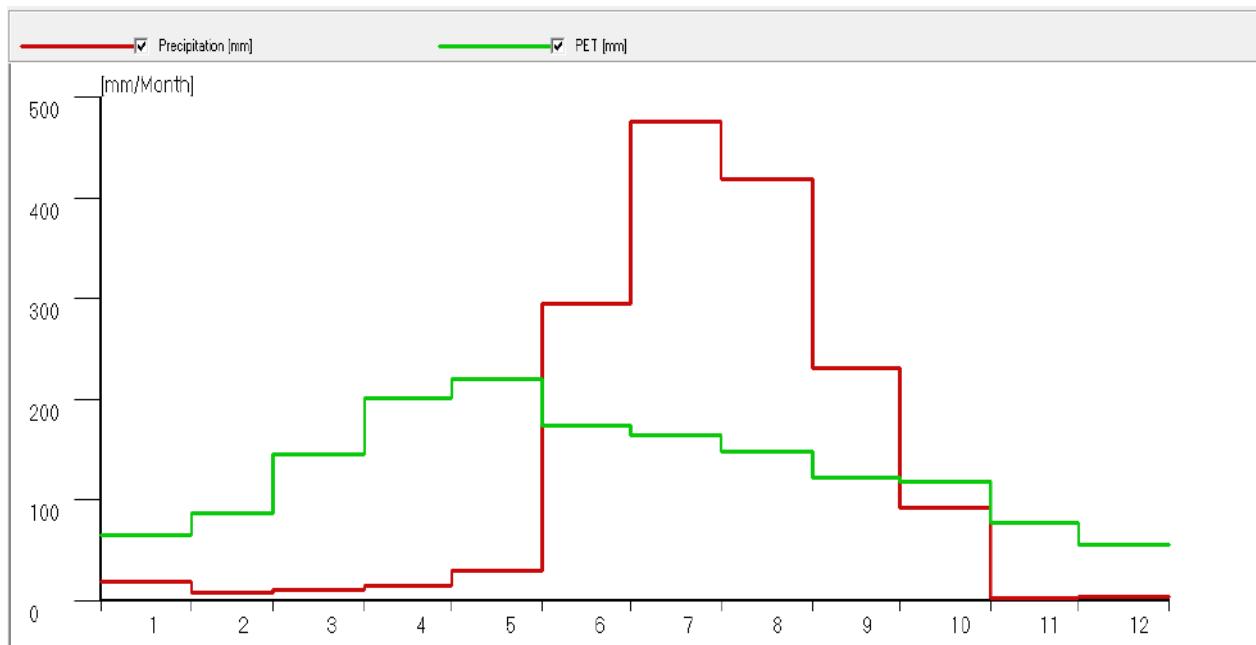


Figure 6 : Graphical Representation of Precipitation and PET in Project Area

Table 5 : Water Vapor Data in the Project Area

Vapor	Best Estimate	Low Estimate	High Estimate	Standard Error	Bias
	[hPa]	[hPa]	[hPa]	[hPa]	[hPa]
January	11.6	9.79	13.41	1.81	-0.16
February	12.7	10.79	14.61	1.91	-0.03
March	15.6	13.16	18.04	2.44	0.32
April	17.5	14.79	20.21	2.71	0.28
May	22.1	18.79	25.41	3.31	-0.1
June	30.1	26.33	33.87	3.77	0.14
July	32.5	29.07	35.93	3.43	0.24
August	32.5	28.9	36.1	3.6	0.08
September	31.5	27.88	35.12	3.62	0.23
October	23.2	19.55	26.85	3.65	-0.14
November	16.6	14.11	19.09	2.49	0.13
December	12.9	10.81	14.99	2.09	-0.03
Mean	21.57	18.66	24.47	2.9	0.08

Table 6 : Wind Data in the Project Area

Wind	Best Estimate	Low Estimate	High Estimate	Standard Error	Bias
	[km/h]	[km/h]	[km/h]	[km/h]	[km/h]
January	3.6	3.12	4.08	0.48	0.24
February	4.32	3.55	5.09	0.77	0.4
March	4.68	4.38	4.98	0.3	0.16
April	6.12	5.44	6.8	0.68	0.36
May	6.12	5.64	6.6	0.48	0.24
June	5.4	4.95	5.85	0.45	0.16
July	4.68	4.12	5.24	0.56	0.24
August	4.32	3.72	4.92	0.6	0.32
September	3.96	3.21	4.71	0.75	0.4
October	3.6	2.83	4.37	0.77	0.4
November	2.88	2.26	3.5	0.62	0.32
December	2.88	2.35	3.41	0.53	0.28
Mean	4.38	3.8	4.96	0.58	0.29

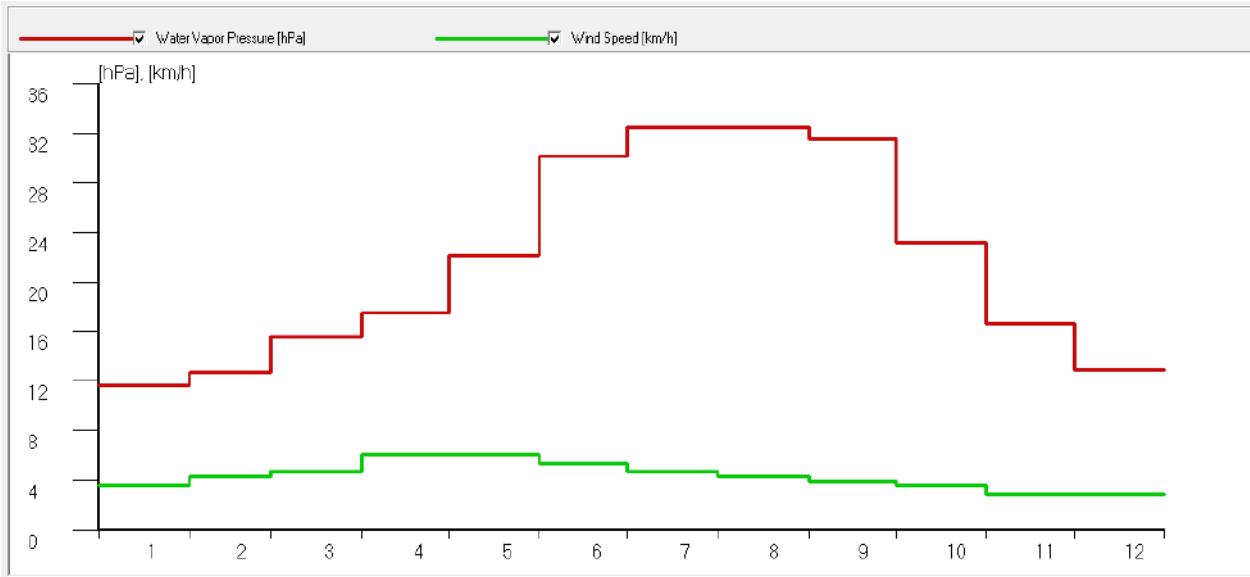


Figure 7 : Graphical Representation of Water Vapour and Wind Speed in Project Area

Table 7 : Sunshine Data in the Project Area

Months	Sunshine Frequency	Day Length	Sunshine Hours
January	71	10:35	7:30
February	75	11:11	8:23
March	73	11:58	8:44
April	74	12:47	9:27
May	69	13:28	9:17
June	48	13:48	6:37
July	53	13:39	7:14
August	50	13:04	6:32
September	48	12:17	5:54
October	64	11:29	7:20
November	75	10:46	8:04
December	74	10:23	7:41
Mean	64.5	12:07	7:44

The project command area has almost a plain topography with a few undulating landscapes. It is gently sloped towards south. The Churia hills lies towards the north whereas plain area, part of Indo-Gangetic Plain, lies towards the south of the sub-project area. Geomorphology suggests that the plain area is formed by alluvial sediments. Sediments consist of debris brought into the valley by the local tributaries and Lesser Himalaya by the river. Sandstone, conglomerate, shale, and quartzite are contributed by north flowing river

2.3 GEOLOGY AND HYDROGEOLOGY

The whole research region is part of the broad Indo-Gangetic alluvial plain's northward expansion. On a geological timescale, the underlying bed rocks are from the Siwalik Formation, which dates from the Middle Miocene to the Pleistocene. The underlying Siwalik beds are covered with Quaternary alluvial deposits comprising river fans, river channels, flood plain deposits, and so on from various rivers running through the Terai Plain via the Siwalik range. This alluvial deposit is narrow in the north and is separated from Churia (Siwalik Hills) by an E-W oriented Himalayan Frontal Thrust (HFT).

The area is in the Terai plain and Siwalik on a regional geological scale (Figure 8 : Geological setting of Nepal Himalaya

) Regional geological map). The Terai is the vast Gages plain's northern extension. From north to south, Nepal divides the Terai into three zones: the Bhabar zone, the inner Terai zone, and the Terai zone. Because the Bhabar Zone is very permeable, it recharges the lower section of the Gangetic plain. The recharge may be due to direct rainwater infiltration or seepage from the rivers that traverse it. Water flows in shallow and deep aquifers based on the arrangement of transmissivities and gradients. Vertical infiltration from rainfall and, to a lesser extent, upward flow of water from the lower artesian zone refresh the shallow aquifer. This is due to the lower aquifer's piezometric head being greater than its upper confining layer. Upper Siwalik, Lower Siwalik, and Middle Siwalik are all parts of Siwalik. The Lower Siwalik is made up of mudstone and sandstone, high mudstone to sandstone ratio, whereas the Middle Siwalik is up of thick-bedded, coarse-grained sandstone with a "pepper and salt" look. The presence of conglomerate distinguishes the Upper Siwalik.

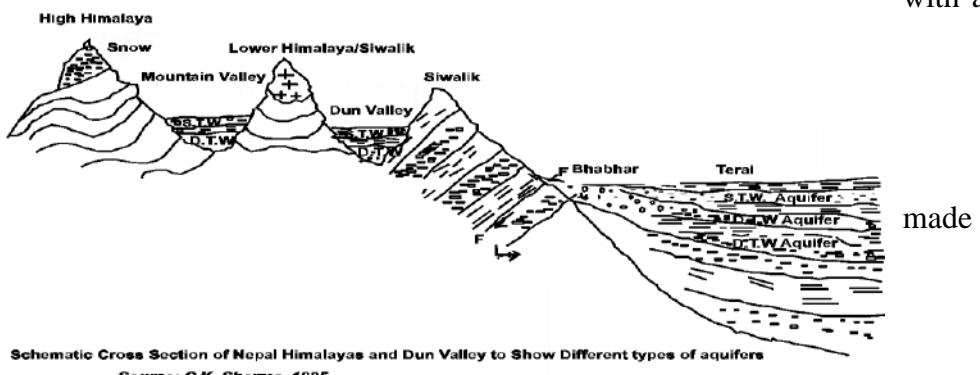


Figure 8 : Geological setting of Nepal Himalaya

The project area comprises of the middle and southern terai of the Nepal Himalaya. The massive deposit of mountainous out wash to the south of the Churia (Siwalik) range produced the Terai sediment of the Rupandehi. It is an accumulation of the collective out wash of the higher geologically soft ranges, to put it another way.

In broad sense, the underground lithology or the ground water sources (aquifers) in the Bhabhar zone may be sub- divided mainly in three categories.

- unconfined aquifer of the Bhabhar Sediments (shallow aquifer)
- confined aquifer of the Bhabhar Sediments (deep aquifer)

The percolation of flows from passing rivers, ponds, lakes, rainfalls, or the irrigated region recharges the unconfined aquifers. According to the model studies, the major outflow from the shallow aquifer delivers extra discharge to the river or spring. Some of this flow returns to the sky as evaporation and then falls back to the earth as precipitation. Similarly, the recharge process in limited or deeper aquifers is completed by a deeper input of water from above aquifers to offset the growing outflow. The flow might be percolation, transverse flow, or something else.

Drilling has revealed an alluvium thickness of more than 450 meters. Very coarse to coarse fractured rock predominates in areas of the Terai at the northern boundary, next to the Churia hills, to form the Bhabar zone. The proportion of fine material in the alluvial succession rises southward. The Western Terai's alluvial aquifers may be thought of as a single complicated aquifer system. The Bhabar zone forms an unconfined aquifer that flows laterally to the south into a system composed of a narrow phreatic aquifer underlain by multiple semi-confined to confined aquifers separated by clayey deposit layers. As a result, the area's primary aquifers have been categorised as:

- A phreatic aquifer of Bhabar sediments
- A confined aquifer of Gangatic sediments
- A phreatic aquifer of Gangetic sediments

The aquifers are recharged by infiltration of rainfall, by seepage losses from water pond on the paddy fields and by transmission losses of flows in the riverbeds. Confined aquifers are under seasonaly varying artesion pressure.

Generally, aquifer materials are coarse and uniform in Bhabhar zone and comperately finer sediment in southern territory. The sediment deposition characteristic of the rivers creates hydrostratigraphic subdivisions and auriferous zoning in the alluvial sediments. Based on the size and occurrence of the sediments in the aquifer, these aquifer materials are classified into three prominent formations-

- a) Hard Formations: Strata made from gravel, cobble and pebble
- b) Medium Formations: strata made form coarse sand, siltstone and fine gravel
- c) Soft Formations: strata made from silt, clay and fine sand

The aquifers in the bhabar zone-northern section of the district are characterized by coarse sediments such as boulder, cobble, and pebble, which constitute the hard formation, whereas the gangetic aquifer in the district's south is defined by finer sediments such as sand and silt. As one moves south, the sediments get smaller in size, generating medium and soft formations. Because the coarse sediments receive infiltrating rainfall and stream runoff, the Bhabar deposits constitute a recharge zone for ground water. As a result, hydraulic parameter qualities like Hydraulic Conductivity (K) and Transmissivity ($T=Kd$) range from acceptable to exceptional. As a result, the Bhabar is the primary recharge location for the Terai plain, and groundwater flows from the Bhabar to the southern Terai.

CHAPTER III

HYDROGEOLOGY OF THE AREA

3.1 HYDRO GEOLOGICAL CONDITION OF THE STUDY AREA.

Since its establishment Ground Water Resources Development Board (GWRDB) has been engaged in collection of data regarding ground water resources in Nepal through various investigation programs. The Groundwater Irrigation Project, also been engaged with investigation and various groundwater related studies since its establishment. However, the data synthesis is not been carried to a great extent. It is very much needed to interpret these data so that the result can be used for the further development and management of the groundwater resources. Now days there are various kinds of analytical tool available which can be used for meaningful interpretation of data. The present work tries to initiate towards the use of the hard copy and raw digital data into digital map in GIS format. This is simply the beginning of the management of the groundwater data which may lead to find the vision to build the national groundwater database in GIS format in the days to come.

Since 1960s, the groundwater investigations have been started in Nepal. The numbers of investigation work have been done in Terai by USAID, GDC, World Bank and Government of Nepal. For irrigation development perspective, GDC (Groundwater Development Consultant) prepared a groundwater development strategy for irrigation in the Terai. The updated versions of groundwater potential map have been developed by GDC in 1994. They provide the groundwater potential maps of the whole Terai region. Since then, there is no update/upgrade have been made so far. However, many groundwater irrigation wells have been constructed and are widely in operation. The integration of those wells to 1994 version of GDC map may improve the prospect of groundwater development strategy. In addition, the different layer such as average screen thickness, well depth, well size, discharge and other informative parameters can be displayed in separate or integrated form in GIS data management system.

The main agencies involved in groundwater development in Nepal are USAID, WORLD BANK, UNDP. They have implemented various programs for generating hydrogeological and

other groundwater information that might be useful for future groundwater development activities.

3.2 DEEP AQUIFER

The deep aquifer potential of the Rupandehi district has been carried under UN, GDC project. The classification method followed by 1987 GDC study is based on the use of mappable indicative values for the aquifer permeability and clay percentage for the deep and shallow aquifer. Although the STW classification is primarily based on aquifer percentage, field transmissivity values have been used to test for consistency between reported lithological section and well performance. The total areas having good and fair deep aquifer potential within the district is located at the north east part of the district. Similarly, about 58350 ha of land have marginal shallow aquifer potential. In the potential map prepared by the GDC three classes for deep aquifers have been set which is shown in table

Table 8 : Aquifer Lithological classification of DTW

Deep Tube wells (46m to 120m)	
Classification	Transmissivity of 100m section (m ² /day)
Good	>2000
Marginal	1000 – 2000
Poor	<1000

Source: Reassessment of the Ground Water Development Strategy for Irrigation in the Terai-Volume 3 Groundwater, GDC- April 1994.

The deep aquifer potential map prepared by the GFO (Figure 5) shows the Central-South part east of Dwanne (dun valley area) of the district is also feasible area for deep tubewell. The deep tube well that has been constructed in this region has good discharge capacity. The total feasible area is about the 21409 hectare of land.

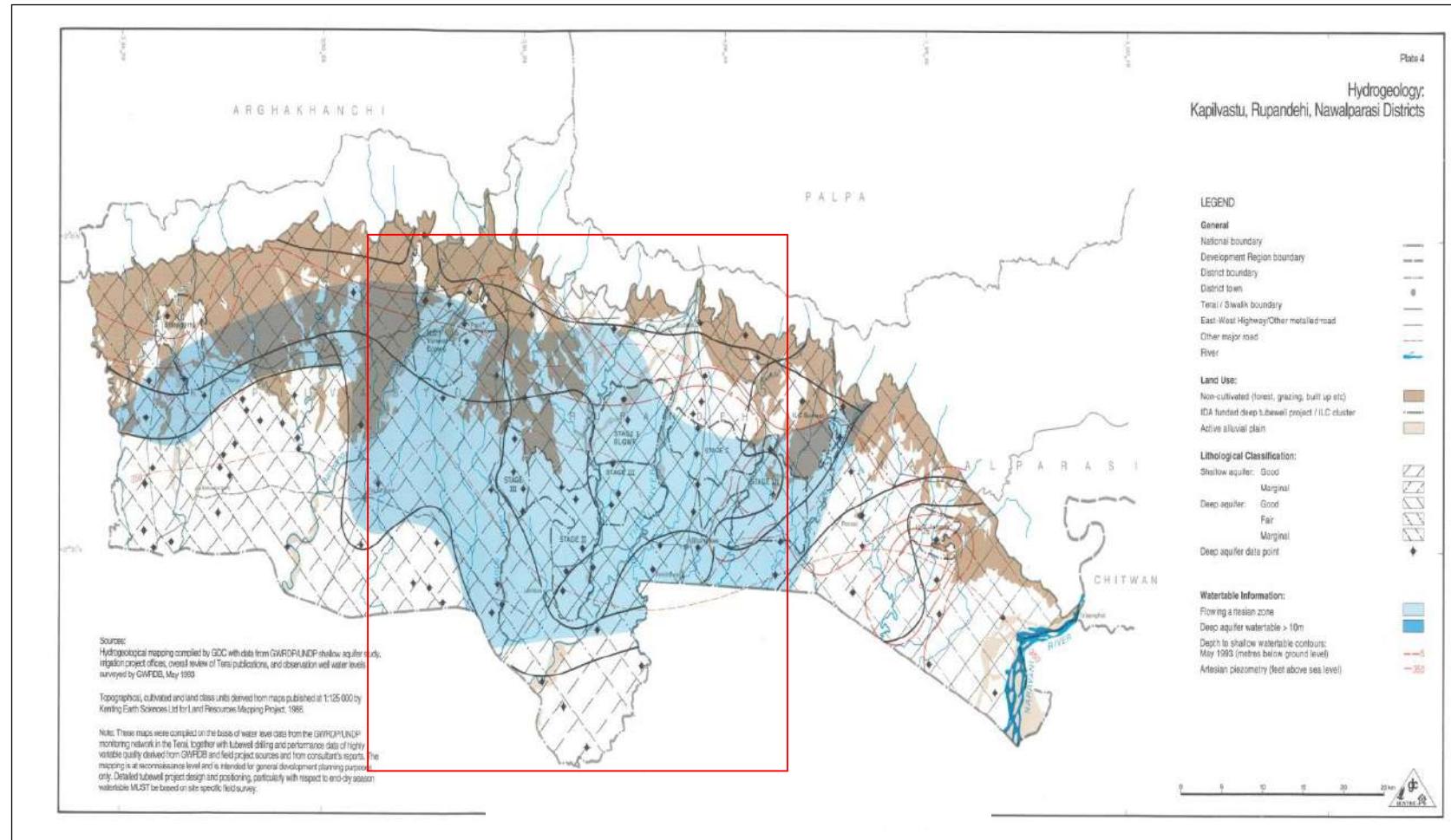


Figure 9 : Hydrogeological Map of Kapilbastu, Rupandehi and Nawalparasi District, GDC1994.

3.3 SHALLOW AQUIFERS

The shallow aquifer potential of the district has been investigated under UNDP shallow tubewell investigation project and GDC. The GBO office has also prepared shallow aquifer potential map of the district. Arial delineation of the feasibility of shallow aquifer in the district by the UNDP was based on following criteria

- A water level that does not exceed 7m in depth in the dry season while pumping
- A discharge adequate to irrigate an individual farm as required
- No deeper than 50m
- 100mm or 4 inch in diameter
- Use of a centrifugal pump
- Powered by a diesel or electrical motor
- Drilled by indigenous methods, if possible

Figure below delineates the area in Rupandehi district where contours of depth of water table do not exceed 5m in shallow tubewell potential zone during the dry season.

3.4 SHALLOW AQUIFER POTENTIAL OF GDC

In the potential map prepared by the GDC three classes for shallow aquifer have been set which is shown in table no 4.2. The STW classification is primarily based on aquifer percentage, field transmissivity values have been used to test for consistency between reported lithological section and well performance.

Table 9 : Aquifer Lithological classification of STW

Shallow tube wells (0 to 46m)	
Classification	Percentage of aquifer
Good	> 40
Marginal*	20-40
Poor*	< 20

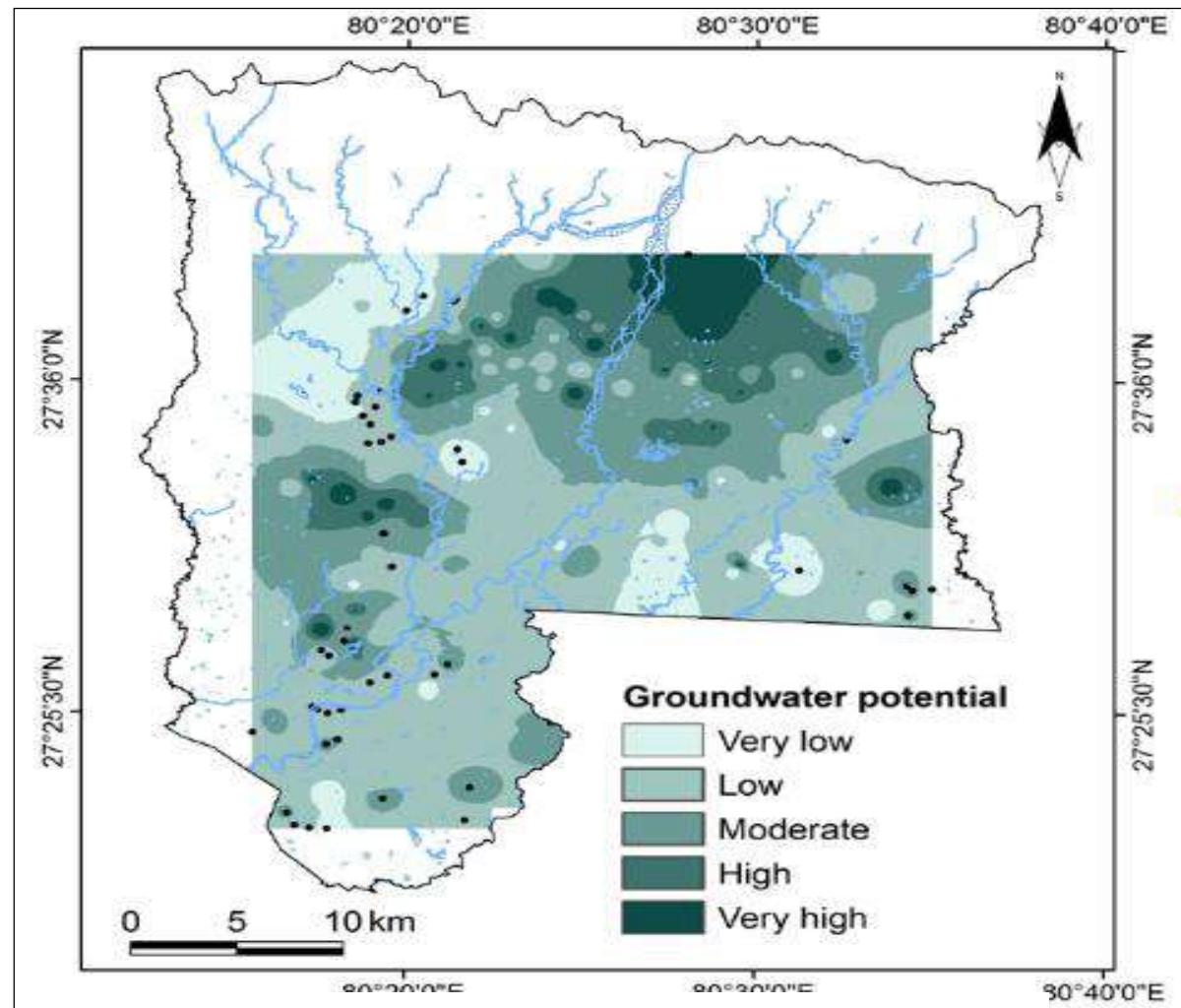


Figure 10 : Shallow Groundwater Potential Map of Rupandehi District, (Pathak 2017)

The shallow aquifer potential map based on GDC reports shows a large part of the district has good shallow aquifer potential in northern east part of the district. There is very less poor area within the district for shallow aquifer exploitation. According to above map of Rupandehi, the areas of Butwal, Suddhodhan, Siyari and Tillotama has very good potential of Shallow Tube well due to good presence of aquifer and so is the case of our study area Lumbini Sanskritik.

3.5 SHALLOW AQUIFER CLASSIFICATION

In view of designs, the hydrogeological units in the district can be, broadly, divided into three group: soft, medium and hard aquifer formation. Soft formation includes sandy aquifer, while medium formation consists of course sand to fine gravel aquifer, likewise hard formation includes course gravel to boulder aquifer. As per drilling methods, in soft formation dhikuli method and in hard formation thokuwa method are applied for manual drilling works in shallow tubewell. In deep tubewell, percussion methods are applied for hard formation whereas rotary method of drilling are applied for soft formation

3.6 SHALLOW WATER LEVEL

3.6.1 PRE MONSOON

The shallow water level map was prepared on the basis of water level collected from the observation shallow tubewell of GWRDB. The map shows deepest shallow water level is found at Northern part of the district. The water level is shallowest is at western part of Lumbini Sanskritik municipality of 2.5 m bgl. General trend of flow direction of ground water north to south. According to our sample survey it has been found that there is good discharge of water in ward no7,8, 9 and 11 as shown in figure below.

3.6.2 POST MONSOON

The post monsoon shallow water level map based in water level shows that the there is an average rise of water level about 2 m within the whole district.

3.7 SHALLOW TUBEWELL DEPTH

In the Lumbini Sanskritik Municipality the shallow tubewell can be drilled within the depth of about 20 meter. In some patches of the area in where tubewell depth should be around 30 m. In the sample survey carried out in the Lumbini Sanskritik Municipality of the sample size of 1296 Household it has been found that about 544 households has been using shallow tube wells.

3.8 EXISTING DEEP TUBEWELL IN LUMBINI SANSKRITIK MUNICIPALITY

During the field work in the project area, about 1296 tube wells data has been collected as a sample survey. These data were completely collected through the interaction with the locals and the owners of the property. By conducting the sample survey of sample size 1296, it has been found that about 31 households has been using hand pumps, 544 are using shallow tube wells and remaining 721 are using Deep tube wells. The shallow and hand pumps are primarily being used in the household purposes where as deep tube wells are primarily used in the field for irrigation purposes.

Further illustration has been made in the figure below which shows the current discharge of the wells respective to wards and depth of the wells with respect to wards.

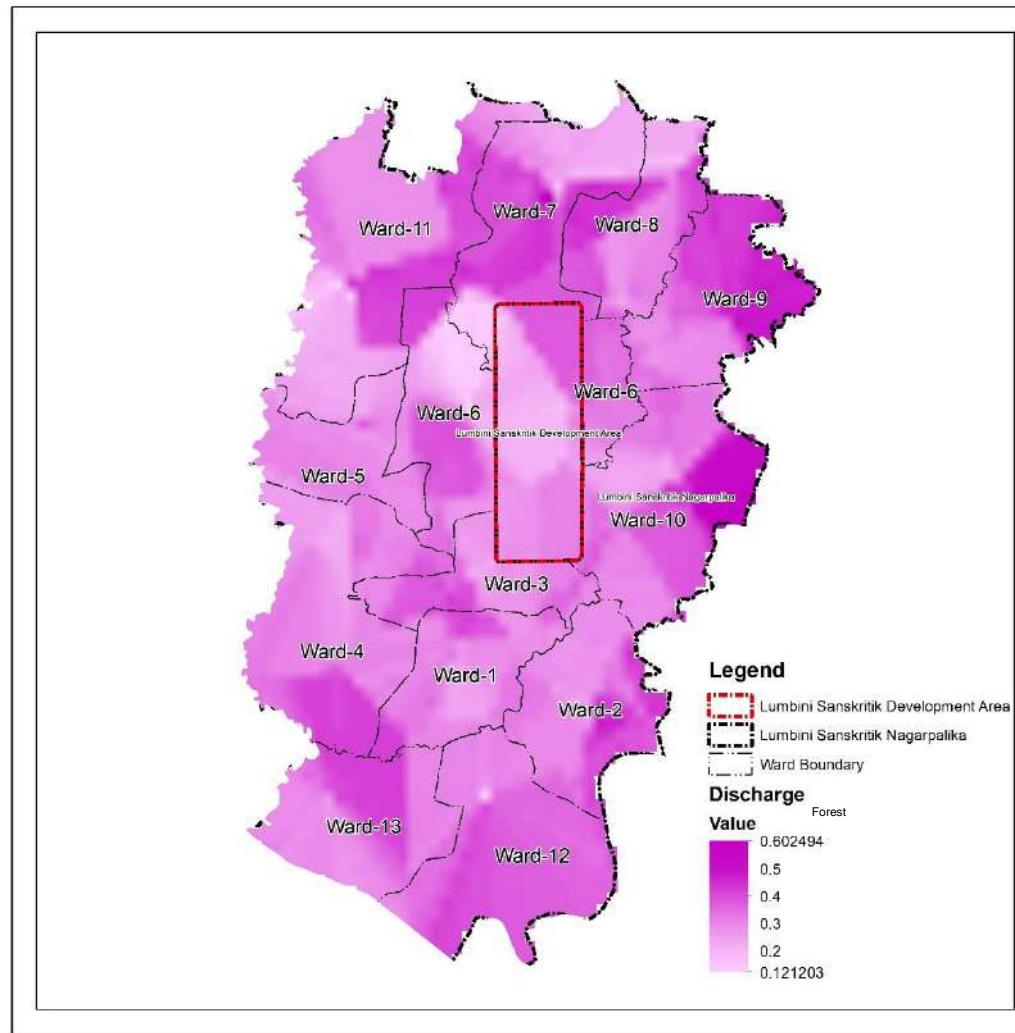


Figure 11 : Discharge variation map of existing DTWs in project area

3.9 WELL DEPTH AND DISCHARGE

Based on the present investigation and available information, the depth of wells in the study area varies from 5 m up to 127 m below ground level. The wells drilled by government agency for irrigation purpose were 120 m to 125 m depth. But the existing drinking water wells and irrigation wells are 5- 125 m depth. The depth variation map based on DTW inventory is shown in **Error! Reference source not found.** below.

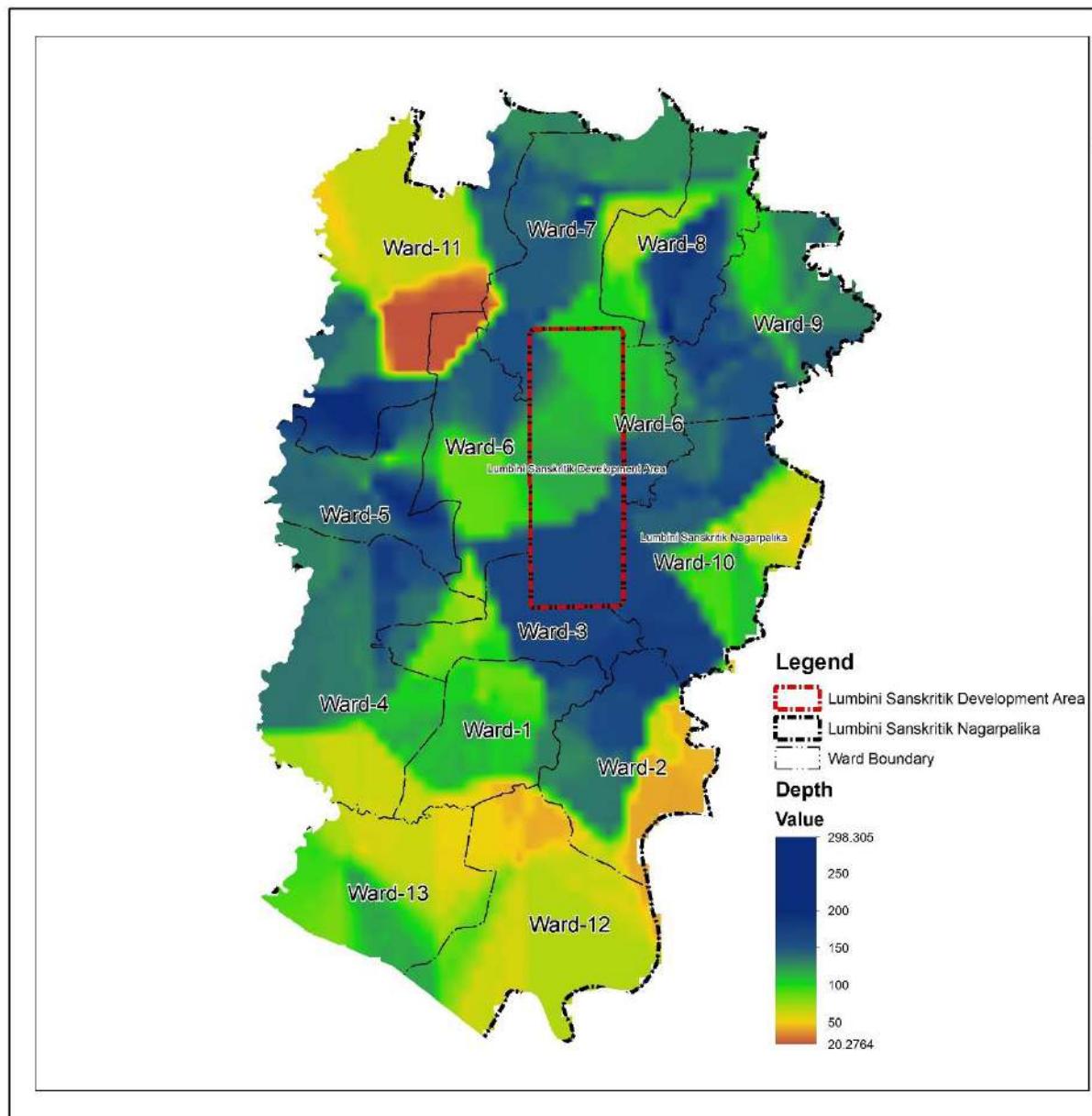


Figure 12 : Depth variation map of existing DTWs in project area

CHAPTER IV

SURVEY AND INVESTIGATION

4.1 FIELD SURVEY

The field works were mainly focuses on existing DTW site to find out the present physical condition & operating status of wells, condition of pumping equipment (VT Pump, Submersible Pump), panel board, transformer and electrical lines. It also covers the performance of DTW system. A standard format of field questionnaire was made and supplied to each villager and after discussion with local people they filled the questionnaire form and returned to consultant team. Interview with questionnaire survey, photographs of the physical status, instrumental exploration as well as well inventory and physical condition assessment. During the visit to the various Groundwater-related offices, consultant team conformed that no geophysical survey has been conducted in that area to date.

4.2 WATER SAMPLING

All glass and plasticware used during sampling and laboratory analysis were soaked in 5% HCl for 24 h and then rinsed with deionized water (Milli-Q) for at least 24 h. All reagent solutions were prepared with Milli-Q water having a resistivity of 18.2 MΩ/cm. In May 2024, tubewell water samples were collected along the different locations of Lumbini Sanskritik Municipality.

Most of the investigated tube wells were currently used by local people for domestic drinking or irrigation purposes. Information such as depth, age, screen interval, method of drilling and construction of tube well were collected via interview with the owner or nearest household user of the well. Each tube well was subjected to 5–10 min of continuous pumping, during which time the redox potential, pH, temperature, dissolved oxygen (DO) (luminescence probe) and electrical conductivity of the water was measured with HACH multimeters (HQd) and freshly calibrated probes. After 5–10 min of pumping and stabilization of physico-chemical parameters, water samples were collected into a clean high-density polyethylene (HDPE) bottle flushed with sample water three times and filled without any headspace.

Each 250 mL sample was immediately (within 5 min of collection) transferred to a mobile field-lab for filtration via 0.45 µm enclosed syringe filter unit and aliquots transferred to colourimetric

reagents or subject to appropriate acid preservation. For on-site separation of As(III) species about ~50 mL of 0.45 µm-filtered water was passed through solid arsenic-speciation cartridges (Metalsoft) and preserved with concentrated HCl. The cartridge contains highly selective aluminosilicate that adsorbs As(V) and allows only As(III) to pass through the column (Le et al., 2000). For cations and trace metals, 50 mL of filtrate was preserved with 0.3 mL of concentrated HNO₃–. For anions, the filtrate was pre-treated with 2 g per 50 mL of cation exchange resin [BioRad AG50W-XB (142–1421)] to prevent metal precipitation and subsequent scavenging of anions. All the water samples were protected from sunlight and stored at 4 °C until further analysis.

Spectrophotometric analysis was performed on the same day of sample collection for dissolved Fe²⁺ and total Fe (FeTot) by the 1,10 Phenanthroline method (APHA, 2005); sulfide by the methylene blue method (Cline, 1969); alkalinity by the bromophenol blue method (Sarazin et al., 1999); phosphate by the ammonium molybdate method (Murphy and Riley, 1958); and ammonia by the salicylate method (Chemetrics vacuvials kits). Additional UV-visible spectra were collected on a filtered aliquot of each sample using an ocean optics portable spectrophotometer equipped with a 10 mm path length quartz cell.

4.3 LABORATORY ANALYSIS

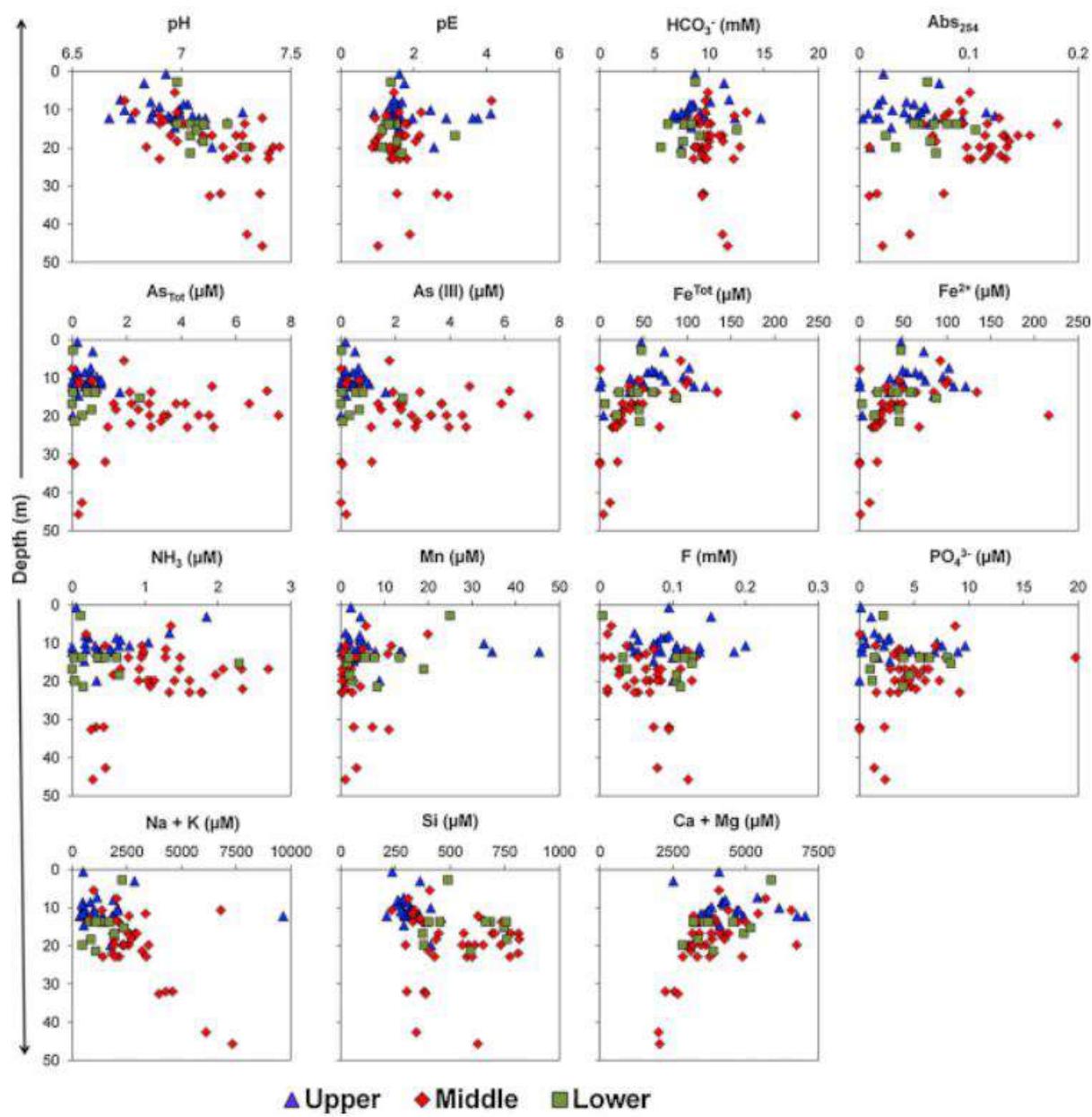
Water samples

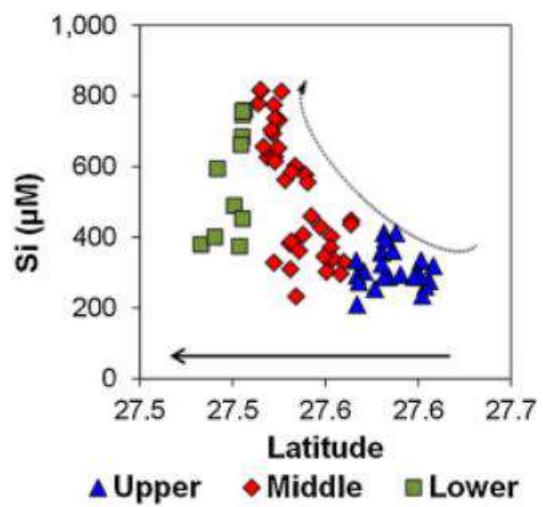
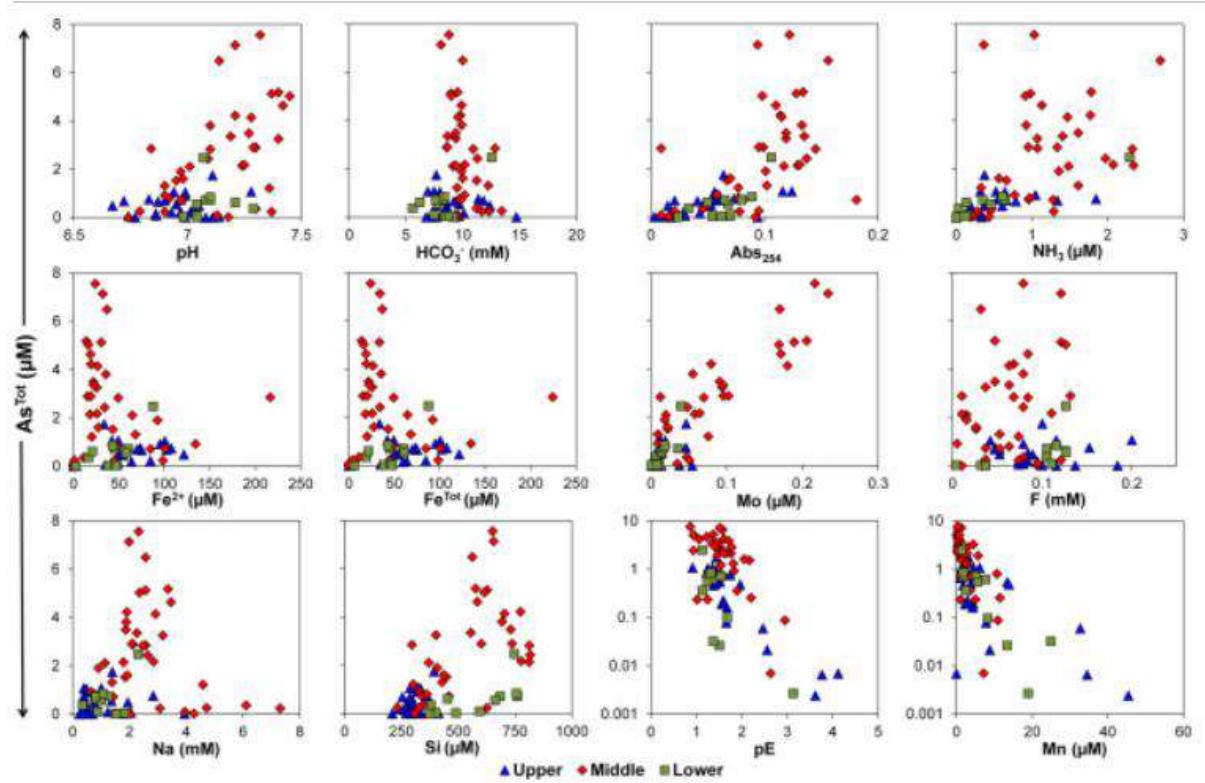
Arsenic was analyzed by Hydride Generation Atomic Absorption Spectrophotometry (HG-AAS; AA280FS, VARIAN Australia Pty Ltd, Australia) with a detection limit of 3.4 nM and a precision within 5%. Individual samples were analyzed in quadruplicate and data presented are means. Major cations, anions and trace elements were analyzed at the Environmental Analysis Laboratory (EAL), Southern Cross University (SCU). Cations (Na, K, Ca, Mg), trace elements (arsenic, manganese, boron, molybdenum, vanadium, silver, mercury, silicon, iron, lead, chromium, cobalt, zinc, nickel, copper, barium, cadmium, aluminum and selenium) and anions (chloride, sulfur, phosphorus and bromide) were analyzed by inductively coupled plasma mass spectrometry (ICP-MS) (Perkin-Elmer ELAN-DRCe). For the purposes of this study, sulfur was assumed to be primarily SO₄2–, as S(-II) was below detection limits. Nitrate, nitrite and fluoride were analyzed by flow injection analysis (FIA) (LACHAT QuikChem 8000).

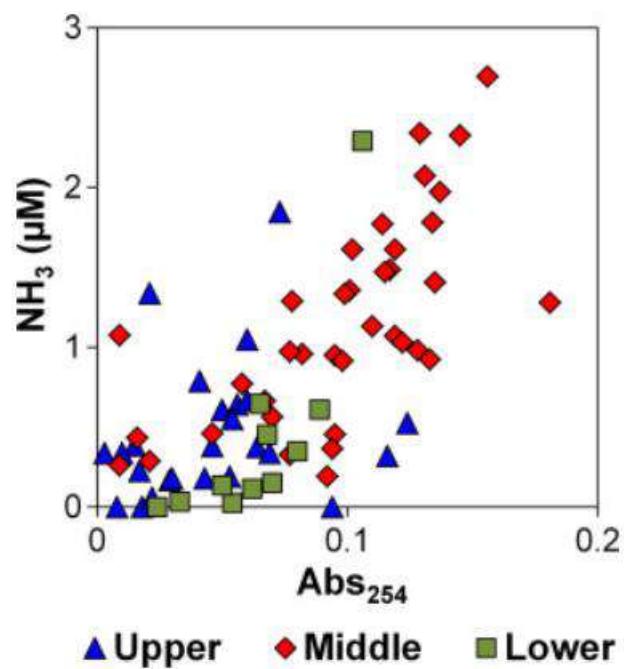
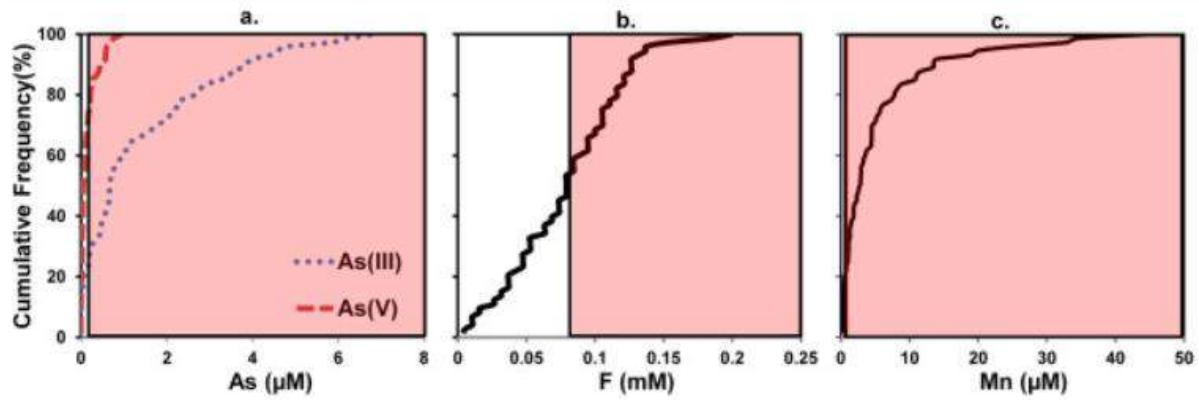
4.4 GROUNDWATER CHEMISTRY

Tubewell geochemical data are summarized in Table below and presented in relation to the depth of tubewell. The groundwater is circum-neutral with pH (6.7–7.5) and the redox potential (pE) between 0.9 and 4.1 indicating the groundwaters are predominately moderately reducing and suboxic. Groundwater had a high amount of HCO₃⁻ (5.6–14.7 mM), variable concentrations of Cl⁻ (0.2–6.2 mM) and other major cations, Ca²⁺ (1.2–4.8 mM), Mg²⁺ (0.5–2.6 mM), Na⁺ (0.2–7.3 mM) and K⁺ (0.01–5.7 mM). The groundwater displayed low concentrations of SO₄²⁻ (0.0–1.5 mM), PO₄³⁻ (0–9.7 µM), NH₃⁺ (0–2.8 µM), NO₂⁻ (0–0.2 µM) and negligible amounts of nitrate and sulfide below detection limits.

	Upper (n=25)			Middle (n=37)			Lower (n=11)		
	\bar{x}	Max	Min	\bar{x}	Max	Min	\bar{x}	Max	Min
Depth (m)	10.6	19.8	0.6	19.3	45.7	5.5	14.8	21.3	2.7
Temperature (°C)	25.5	27.3	24.3	25.6	26.7	24.6	25.3	25.7	25
pH	7	7.3	6.7	7.1	7.5	6.7	7.1	7.3	7.0
pE	1.9	4.1	0.9	1.6	4.1	0.9	1.5	3.1	1.1
DO	23.2	151.3	0	24.7	105.6	0	29.5	103.8	0
EC (µScm ⁻¹)	884	2230	632	894	1834	629	849	1294	553
HCO ₃ ⁻	8.94	14.72	6.78	9.98	13.42	7.94	8.18	12.53	5.58
Fe ²⁺	54.38	121.55	bdl	41.77	216.47	bdl	42.29	87.64	2.69
Fe ^{Tot}	54.89	121.55	0.02	42.41	224.33	1.6	43.17	87.64	5.79
As(III)	0.44	1.64	bdl	2.33	6.87	bdl	0.54	2.26	bdl
As _{Tot}	0.49	1.75	bdl	2.58	bdl	bdl	0.59	2.48	0.003
NH ₃ ⁺	0.46	1.85	bdl	1.15	2.69	0.19	0.44	2.29	bdl
NO ₃ ⁻	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
NO ₂ ^{-#}	93	203	bdl	77	159	bdl	91	159	29
PO ₄ ³⁻	2.99	9.67	bdl	4.60	19.78	bdl	4.23	8.35	0.97







CHAPTER V

SOCIO-ECONOMIC ASSESSMENT

The complete data about the physical, social, economic, demographic, environment, financial and organizational structure of the municipality gives the clear picture about the existing situation and status of the municipality. Physical data of the municipality includes information about the road facilities, water supply and drinking water, sanitation and sewerage system, integrated solid waste management and electricity supply system, tele-communication and others. Social data includes information about the education facilities and institute, health institute, fire station, religious institution, security, socio-culture facility, library, etc. similarly demographic data includes different data collected which gives population and household distribution based on different topics like caste, religion, disability, age group etc. environmental data gives information about existing environmental condition , disaster and natural hazard, Economic data includes different income generating source. Financial and organizational data are gives financial condition and organizational status of the municipality.

5.1 INTRODUCTION

Table 10 : Introduction of Municipality

Name of Municipality	Lumbini Sanskritik Municipality
Province Number	5
District	Rupandehi District
Number of wards	13
Area	112.21 sq.km.
Lies	Lumbini Sanskritik is a municipality situated in <u>Rupandehi District</u> of <u>Lumbini</u> Province in Nepal. Lumbini the Buddhist pilgrimage site where Buddha was born lies in the center of this municipality. In terms of geographical location, the municipality is located at $27^{\circ} 28' 1.78''$ N, $83^{\circ} 16' 29.68''$ E . With the total area of 112.21 sq. Km.
Settlement	<u>Bhagawanpur</u> , <u>Tenuhawa</u> , <u>Ekala</u> , <u>Khudabazar</u> , <u>Madhuwani</u> , <u>Masina</u> ,

The brief description about the existing condition is summarized below:-

5.2 DEMOGRAPHIC DATA

According to Population Census 2011, it was reported that 72,497 persons live in 13,621 households of Lumbini Sanskritik Municipality.

Table 11 : Demography based on Ethnicity, Religion, Working age, literacy

S.N.	Population according to	Description
1	Ethinicity	As per the census 2011, the major ethnic/caste group of Lumbini Sanskritik Municipality are Muslim (23,568), Yadav (9,816), Lodh (5,732), Chamar/Harijan/Ram (4,569) and Kahar (3,773) with total population of 47,458, which forms 65.46 percent out of total population of 72,497 in Lumbini Sanskritik Municipality.
2	Religion	Most of the people in Lumbini Sanskritik follows Hindu religion. About 48898 population follows Hindu religion which is 67.45 % of total population of Lumbini Sanskritik municipality. 71 peoples follows Buddism Religions which is 0.09% of total population, 23564 peoples follows Islam Religions which is 32.50% of total population, 2 peoples follows Kirat Religions which is 0.002% of total population, 26 peoples follows Christianity Religions which is 0.036% of total population , 30 peoples follows Prakriti Religions which is 0.041% of total population,56 peoples follows Others Religions which is 0.077% of total population
3	Working age	According to 2018 Economic Census, there are total 1,958 establishments in Lumbini Sanskritik Municipality that are involved in various economic activities. In those establishments, total 4,868 persons are engaged for the economic activities, as a self-employed or an employee, with total male engagement of 4,049 and female engagement of 819 persons.In every business, there were an average of 2.49 people engaged with average males are 2.07 and females are 0.42. The ratio of male to female engagement in the establishments are 4.94, which means as many as 4.94 males are enagement in the economic activities per female.
4	Literacy status	The total literacy rate of Lumbini Sanskritik municipality is Male 51.27% and Female 48.73%. The literacy rate of male is higher than female in all the wards of this municipality.

5.3 PHYSICAL DATA

This data gives information about the physical form of infrastructure and services existing in this municipality. Table below shows the brief introduction of the different physical data existing in this municipality.

Table 12 : Physical data of Lumbini Sanskritik Municipality

S.N.	Physical data	Description
1	Road	The Lumbini Sanskritik municipality has been connected with Hulaki Rajmarga. It is connected near to Kapilvastu District. This road passes through the settlement of this municipality. Some of the area has network of earthen type. After the formation of new municipality, many road networks have been proposed and local people are actively participating in campaign for the construction of road network.
2	Water supply	Among total household of this municipality people are having drinking water from pipe and tap. About 3420 household are using drinking water from pipe and tap with premises that is 25.12%, 2052 household are using drinking water from pipe and tap without premises that is 15.06%, 7676 household are using drinking water from tubewell and handpump that is 56.35%, 24 household are using drinking water coveredwell/kuwa that is 0.17%, 36 household are using drinking water uncoveredwell/kuwa that is 0.26%, 158 household are using drinking water from sprout water that is 1.15%, 31 household are using drinking water from jar/bottle that is 0.23% and 224 household are using drinking water others sources that is 1.64%.
3	Sanitation/Sewerage	Mostly people are using normal toilet. 6332 household are using ordinary(Pit) toilet, 625 household are using flush toilet(Public sewerage), 5055 household are using flush toilet septic tank, 94 household are using public toilet and 1488 household is not having toilet facility.
4	Solid waste management	Most of the people burn the solid waste near their houses

S.N.	Physical data	Description
6	Electricity	According to survey of Lumbini Sanskritik municipality the maximum source of fuel for lighting is discovered as electricity. 95.22 percent household are using electricity. Compared to electricity population using solar is less in number. There are 2.6 percent people using kerosene, 0.74 percent people are using solar, 0.27 people are using bio-gas and 1.13 percent people are using others sources as their source of lighting
7	Tele-communication	There are facilities of written information, electric information mobile service and landline service in this municipality. Different newspaper & magazine, Radio television, prepaid postpaid mobile service and landline service are serving people of this municipality.

5.4 SOCIAL DATA

The social data of this municipality gives existing social information.

Table 13 : Social data of Lumbini Sanskritik municipality

S.N.	Social data	Description
1	Education	According to the educational condition of this municipality. 4185 population are beginners/ECD, 23681 population are having primary education, 13270 population are having lower secondary education, 6785 population are having secondary level education, 1874 population are having SLC and equivalent education, 3477 population are intermediate and equivalent, 946 population are graduate and equivalent, 431 population are post graduate equivalent and above.
2	Health	In this Lumbini Sanskritik municipality, there are total 7 health post which is serving all the people of this municipality. Health post of this municipality are providing health service like family planning, vaccination service, clinic service only. There are lack

S.N.	Social data	Description
		of primary health service, hospital, private hospital in this municipality so people need to go to headquarter for their major health problem.
3	Religious Institution	There are many important religious places in this Lumbini Sanskritik municipality. Siddhartha Gautam Buddha was born in this municipality so this municipality is name as Lumbini Sanskritik Municipality.
4	Other Institution	Financial institutions, cooperatives and banks are located in Lumbini Sanskritik Municipality bazaar area. Mahila saving and Credit , Samjhana nagarik sachet Kendra, Samaiji nagarik sachetana Kendra, pragatisil aama samuha are the major institution of this municipality.

5.5 ECONOMIC INFRASTRUCTURES

The people of this municipality are involved in different occupation for income generation.

Table 14 : Economic data of Lumbini Sanskritik municipality

S.N.	Economic	Description
1	Agriculture	Agriculture is the main occupation of this rural municipality. Commercial farming of vegetables, fruits and even tea farming have been initiated in small scale. However the out migration of the youth for employment has led some of the farmlands in barren condition. Paddey, Wheat, Maize etc are the major crops of this municipality Fruits such as banana, guava, mango, are grown here whereas vegetables such as potato, onion, cauliflower, garlic, green vegetable are grown here.
2	Poultry farming	Commercially numbers of poultry farms are established in this municipality. The farmers are keeping both types of poultry birds

S.N.	Economic	Description
		(Hybrid and Local)
3	Livestock farming	Number of buffalo, cow, sheep, Goat, pig, hen, duck and others are raised for different purpose like selling, milk production, fuel for cooking etc.
4	Industry	Mostly service related industries are registered. Manufacturing industries come after that. Due to its well connection with other municipalities with roads, enough agricultural land and availability of raw materials the future of industrial sector is good in the municipality.
5	Tourism	Municipality has immense potential for Religious and Cultural tourism. Lumbini Sanskritik Municipality's major tourist includes religious sites and sighting. Birth place of Gautam Buddha is one of the major tourism sites of this municipality. Temples like Maya Devi Temple, Myanmar swarna Temple, Korean Temple, Royal Thai Monastery are some of the important religious places of this municipality.

5.6 RISK IN THE MUNICIPALITY

The result acquired through the analysis reveals the fact the study area needs immediate action to take against flood such as river training or embankment or levee construction to protect the given area by flood. The people in Lumbini Sanskritik municipality settlement area are at risk of flood hazard of River, so these people need to be shifted from this area to the area free of flood and other risk. With the monsoon season fast approaching, the families live in constant fear of floods. There current settlement is protected by a makeshift embankment that could give way anytime. Some other risk are seismic risk, industrial risk, fire risk, epidemic risk etc. No disaster management committee established in this municipality. No effective steps have been taken in context of disaster management.

5.7 DEMOGRAPHIC ANALYSIS

Demographic Analysis helps us to determine the future population and show the future course of fertility, mortality and migration. The project will be designed in order to fit the future projected population. This topic deals with the determination of population growth rate, ethnic distribution, age and house hold size and project the future population and possible migration.

The MoUD (2015) states that urban growth is the consequences of three mutually reinforcing transitions:

- Demographic transition i.e. more people are entering the labor force than leaving
- Spatial transition due to rural urban migration
- Economic transition due to the demise of the traditional subsistence economy, the declining contribution of agriculture to the Gross Domestic Product (GDP) and search of new livelihood options

Determination of population growth rate

Based on the CBS data, an analysis of population growth trend of Nepal, Lumbini Province is performed. Formula used for the calculation of growth rate is as follows:

$$F = P(1 + i)^n$$

Where,

F = Future population

P = Present Population

i = growth rate

N = period in years

Population Growth rate of Lumbini Province

Population of the province was 44,499,272 in 2011. The population in 2001 was less in Lumbini Province as compared to the 2011. The population of 2001 of Lumbini province was 3,955,719. Due to the increase of the population from 3,955,719 to 44,499,272 over the decade. However, the population reached to 5124225 in 2021 (source:- household survey). So, the population growth rate from 2011 to 2021 is 1.25%.

Table 15 : Population growth rate

	Population in		Change in Population	Annual Growth rate (%)
	2011	2021		
1	4,499,272	5,124,225	624,953	1.25

Population growth rate of Nepal

Nepal is showing signs of an average healthy growth rate of 1.35% according to the CBS.

As per CBS data, population of Nepal was 23,151,423 in 2001 which increased to 26,494,514 after 10 years in 2011. The growth rate of Nepal is calculated to be 0.0135 by following

arithmetic growth rate formula. ($F=P(1+i)^n$) Hence, we will project the population of Lumbini province by taking the population growth rate of Nepal as 0.0135.

Population Growth Rate of Rupandehi District

Rupandehi District is one of the part of Lumbini Province. In 2011, population of Rupandehi was 880,196 which increased to 1,121,957 after a decade.

Table 16 : Population growth rate of Rupandehi District

Population in		Growth rate (i)=(F/P)^(1/n)-1
2011	2021	
880,196	1,121,957	2.4%

As the population has increased, the growth rate is positive. People having less knowledge about the family planning is the main cause of population growth in this district. This trend can be controlled by providing proper awareness about the effect of population growth in the district.

5.8 ETHNIC DISTRIBUTION

This topic deals with the analysis of the various ethnic population residing in the municipality. Around 32.51 percent of the populations are Muslim, 13.54% are Yadav, 7.91% are Loadh, 6.30% are Chamar/Harijan/Ram, 5.20% are Kahar, 3.16% are kurmi, 20.53% are Brahman Pahadi, 2.39% are Dhobi, 2.33% are Dushad/Pashwan/Pashi, 2.24% are Teli and 21.88% are Terai others, Hilly adivashi, Cheetri and others. Proportion of different ethnicity of Lumbini Sanskritik is given in table below:

Table 17 : Ethnicity distribution of Lumbini Sanskritik

S.N	Ethnicity	Percentage of Population
1	Muslim	32.51
2	Yadav	13.54
3	Loadh	7.91
4	Chamar/Harijan/Ram	6.30
5	Kahar	5.20
6	Kurmi	3.16
7	Brahman Pahadi	2.53
8	Dhobi	2.39
9	Dushad/Pashwan/Pashi	2.33
10	Teli	2.24
11	Others	21.88

Findings:

About 67.25% population follows hindu religion while 32.50% population follows Islam, 0.10 percent population follows Buddhism, 0.04 population follows Prakriti, 0.03% population follows Christian and 0.08% population follows others religion. Hindu population is more than other population living in this municipality

5.9 AGE WISE POPULATION:

Age is vital demographic variables. Determination of the economically active population is to provide a base on which to measure labour supply, labour input and the extent to which available human resources are being utilized in the production process of the economy. Such information is essential for planning and formulating policies on the development of human resources.

The main aim of analysis of age wise population is to determine the economically active and economically inactive population. This analysis considers population of age group (15 to 59) as economically active population and other (0-14 and 60 above) as economically inactive. Total active population of the municipality is 48,649 whereas 38,976 are economically inactive population.

The table below depicts the population of different age group of Lumbini Sanskritik Municipality.

Table 18 : Age wise population in Lumbini Sanskritik Municipality

Age Group	Total	Share (%)	Male	Female
0 to 14	31,729	36.21	16,097	15,632
15 to 59	48,649	55.52	23,349	25,300
60 or above	7,247	8.27	3,718	3,529
Total	87,625	100	43,164	44,461

(Source:- CBS 2021)

Analysis:

The data shows that the economically active population (55.52%) are relatively higher than the economically inactive population (44.48%). It clarifies that the municipality has majority of active population and can work for the development of the municipality. On the other hand, the municipality should be able to provide employment to the active population to minimize the out migration of skilled human resources.

5.10 HOUSEHOLD SIZE

Household size refers number of persons living together in one house. This topic deals with the calculation of HH size and number of houses in each wards. Larger households are generally associated with greater crowding in the dwelling, as well as poverty and unfavorable health conditions.

Table 19 : VDC wise HH and family size

Lumbini Sanskritik Municipality	Total HH	Number of HH having									
		1 Person	2 person	3 Person	4 Person	5 person	6 Person	7 Person	8 person	9&more Person	
		15871	793	1739	2613	3781	2666	1609	942	608	1120

(Source: - Household survey)

5.11 MIGRATION

Migration is one of the major demographic factors to bring change in population size, structure and distribution. It is generally defined as a geographical form of population movement involving change of usual place of residence. Internal migration is associated with change of usual place of residence within the national boundary. People migrate to different places to earn their livelihood. Even people inside country migrate from one place to another place for job, occupation and business to earn money. People migrate and stay to other place along with their family.

Out migration data of Lumbini Sanskritik municipality is shown in table below:

Table 20 : Lumbini Sanskritik Out-Migration

Main Reason of Migration										
Total	Work/ employment	Trade/ business	Study/ training	Marriage	Dependent	Natural calamities	Agriculture	Returning home	Others	Not stated
10443	295	158	62	9356	253	2	34	38	122	123

(Source: Migration data of Nepal)

Most of the resident of Lumbini Sanskritik Municipality migrate towards India, and Kathmandu, Butwal.

5.12 LAND USE ANALYSIS AND URBANIZATION

The main objective of land use analysis is to reveal demand and supply situation of vacant land for various use.

Land use analysis needs to be done to know the existing land use patterns and to plan the future use of land appropriately. Land use is a means of broadly classifying different types of activities relating to how land is used. The land use planning is necessary for the social development and physical development characteristics. To reach to the perfect project and plan to be effective and implemented, the planning process must take account the past development activities as well as current condition of land.

Urbanization can be achieved with the proper use of land. While the process of urbanization has important implications for changes in demographic characteristics and transformation of the physical landscape. A detailed understanding of the dynamics of urbanization induced land-cover change is therefore, necessary for coping with environmental changes and facilitating sustainability.

Existing land use

The first step in the land use analysis process is to determine the existing land use. The primary purpose of it is to accurately determine Lumbini Sanskritik's present land use situation so that the planning for future land use can be done. One of the most important prerequisites for the preparation of the DED is a good knowledge and analysis of the existing land use trends, natural physical constraints to development, usable vacant land and land for future uses. Since Lumbini Sanskritik is famous for its agro based products, a **major portion of** the land is used up for **agricultural purposes**.

The existing land use pattern of the municipality is shown in table below:

Table 21 : Land Use Pattern

Description	Area (Sq.km.)	%
Cultivation	101.67	90.61
Forest	5.6	4.99
Water Body	1.92	1.71
Others	3.02	2.69
Grand Total	112.21	100

About 90.61% of the land of the Municipality is covered by Cultivation land. About 1.92 sq. km of land is occupied by the water bodies such as river, lakes, ponds, canals etc. 1.71% of the land is covered by water body and 4.99% by forest and 2.69% by others.

Land use in the Lumbini Sanskritik is a combination of forest and agriculture. Lumbini Sanskritik Municipality lies in a terai region with large areas of plain land.

The pie chart showing the existing land use of the municipality is given below:

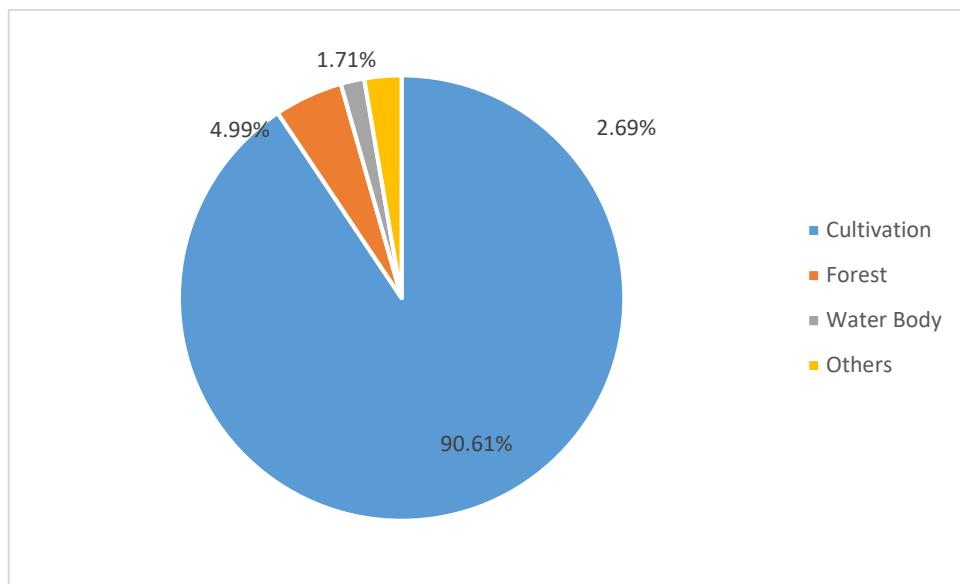


Figure 13 : Existing Land Use Pattern

It clarifies that 1.87% of land is open spaces (vacant land). So, these lands can be utilized for construction of development infrastructures.

5.13 MARKETING FACILITIES AND COMMODITIES

The nearest major marketplace is Butwal and Parasi Bazar. Because of the transportation facilities, agricultural products can easily be transported and sold in and around whenever necessary. Similarly necessary household commodities for household consumption can also be transported to the project area from outside.

CHAPTER VI

WATER RESOURCES ASSESSMENT

6.1 PRESENT WATER UTILIZATION

Farmers in the proposed project region are unable to use water for irrigation because DTW systems are inoperable and must be repaired. There is now no alternative permanent source of irrigation other than those DTWs, which are also inefficient. Currently, they rely primarily on rainfall (monsoon).

Irrigation from deep tubewells is used by farmers in the project area, which covers an area of about 28000 hectares. Farmers invest a significant amount of time and money each year to keep the DTWs operational. Due to water constraint, farmers have fewer crop options and are unable to use enhanced kinds. As a result, they'll have to rely on traditional monsoon crops like rice, wheat, and oilseeds. During the dry seasons, most of the land is kept fallow. When the monsoon is good, the food stuffs are consumed entirely inside the region and are rarely traded. Other than potatoes, farmers produce lesser quantities of veggies for daily use. As a result of the absence of consistent year-round irrigation, there is relatively limited commercial cultivation of vegetables and other food products.

6.2 GROUND WATER RESOURCES

During the field study for data collection, it was discovered that the region lacked enough DTWs for irrigation and drinking. The available data from those DTWs are used to correlate and interpolate the lithology. Based on the data provided, these wells have great hydraulic gradients and transmissivities, as well as favorable recharging conditions. The aquifer condition for the deep tube well may be assessed to be outstanding.

The aquifer characteristics of these DTWs are excellent, as evidenced by a suitable hydraulic gradient, high transmissivities, and adequate recharge.

6.3 WATER BALANCE IN GROUNDWATER SYSTEM

In broad sense, the underground lithology or the ground water sources (aquifers) in the Bhabhar zone and the Terai area of Nepal may be sub-divided mainly in three categories.

- A Phreatic aquifer of the Bhabhar Sediments

- A Phreatic aquifer of the Gangetic Sediments
- A Confined aquifer of the Gangetic Sediments

All these aquifers are recharged by water from the north. The percolation of flows from crossing rivers, ponds, lakes, or the irrigated region recharges the phreatic aquifers. The ground water source system, or the ground water phenomenon, must stay consistent in order to maintain the natural balance of water inside the earth; otherwise, natural misbalance may occur, resulting in natural catastrophes. As a result, natural subsurface investigations of groundwater flow should be taken carefully.

Groundwater balance has been calculated based on the Duba (1982) states that the total water recharge from the rainfall is about 22.2% of annual rainfall in the context of Terai region. The calculation of water availability is shown in the **Error! Reference source not found..** The total availability of water in the Rupandehi district is found as 131.11 MCM.

Table 22 : Groundwater balance table for Rupandehi District

Ground water Balance at Rupandehi								
			Discharge					
Total Rechargeable area in hectare	total 22.2% from the rainfall (Duba 1982)	Recharge (MCM)	Number of shallow tubewells	Number of deep tubewells	Number of deep tubewells (Drinking water)	Total Discharge (6hour per day)	Water availability (MCM)	Remarks
40752.33	362.4	147.69	101	66	24	16.58	131.112	Discharge of tubewell for shallow taken as 3lit/sec and deep tubewell is taken as 20 lit/sec

CHAPTER VII

WATER QUALITY ASSESSMENT

7.1 WATER QUALITY

For any water body to function adequately in satisfying the desired use, it must have corresponding degree of purity. Drinking water should be of highest purity. As the magnitude of demand for water is fast approaching the available supply, the concept of management of the quality of water is becoming as important as its quantity. Each water use has specific quality need. Therefore, to set the standard for the desire quality of a water body, it is essential to identify the uses of water in that water body. In India, the Central Pollution Control Board (CPCB) has developed a concept of designated best use. According to this, out of the several uses of water of a particular body, the use which demands highest quality is termed its designated best use. Five designated best uses have been identified. This classification helps the water quality managers and planners to set water quality targets and design suitable restoration programs for various water bodies.

Table 23 : Designated best uses of water

Designated Best Use	Class	Criteria
Drinking Water Source without conventional treatment but after disinfection	A	<ul style="list-style-type: none">1. Total Coliforms Organism MPN/100ml shall be 50 or less2. pH between 6.5 and 8.53. Dissolved Oxygen 6mg/l or more4. Biochemical Oxygen Demand 5 days 20 °C, 2mg/l or less
Outdoor bathing (Organised)	B	<ul style="list-style-type: none">1. Total Coliforms Organism MPN/100ml shall be 500 or less2. pH between 6.5 and 8.53. Dissolved Oxygen 5mg/l or more4. Biochemical Oxygen Demand 5 days 20 °C, 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	<ul style="list-style-type: none">1. Total Coliforms Organism MPN/100ml shall be 5000 or less2. pH between 6 and 93. Dissolved Oxygen 4mg/l or more4. Biochemical Oxygen Demand 5 days 20 °C, 3mg/l or less
Propagation of Wild life and Fisheries	D	<ul style="list-style-type: none">1. pH between 6.5 and 8.52. Dissolved Oxygen 4mg/l or more3. Free Ammonia (as N)4. Biochemical Oxygen Demand 5 days 20 °C, 2mg/l or less

7.1.1 SOURCES OF GROUNDWATER POLLUTION

Saltwater encroachment associated with over drafting of aquifers or natural leaching from natural occurring deposits are natural sources of groundwater pollution. Most concern over groundwater contamination has centered on pollution associated with human activities. Human groundwater contamination can be related to waste disposal (private sewage disposal systems, land disposal of solid waste, municipal wastewater, wastewater impoundments, land spreading of sludge, brine disposal from the petroleum industry, mine wastes, deep-well disposal of liquid wastes, animal feedlot wastes, radioactive wastes) or not directly related to waste disposal (accidents, certain agricultural activities, mining, highway deicing, acid rain, improper well construction and maintenance, road salt). Table 3.2 shows a list of the potential groundwater contamination sources on the basis of the position of occurrence.

7.1.2 NATURAL SOURCES

Groundwater contains some impurities, even if it is unaffected by human activities. The types and concentrations of natural impurities depend on the nature of the geological material through which the groundwater moves and the quality of the recharge water. Groundwater moving through sedimentary rocks and soils may pick up a wide range of compounds such as magnesium, calcium, and chlorides. Some aquifers have high natural concentration of dissolved constituents such as arsenic, boron, and selenium. The effect of these natural sources of contamination of groundwater quality depends on the type of contaminant and its concentrations.

7.1.3 AGRICULTURAL SOURCES

Pesticides, fertilizers, herbicides and animal waste are agricultural sources of groundwater contamination. The agricultural contamination sources are varied and numerous: spillage of fertilizers and pesticides during handling, runoff from the loading and washing of pesticide sprayers or other application equipment, using chemicals uphill from or within a few hundred feet of a well. Agricultural land that lacks sufficient drainage is considered by many farmers to be lost income land. So they may install drain tiles or drainage wells to make the land more productive. The drainage well then serves as a direct conduit to groundwater for agricultural wastes which are washed down with the runoff. Storage of agricultural chemicals near conduits to groundwater, such as open and abandoned wells, sink holes, or surface depressions where ponded water is likely to accumulate. Contamination may also occur when

chemicals are stored in uncovered areas, unprotected from wind and rain, or are stored in locations where the groundwater flows from the direction of the chemical storage to the well.

7.1.4 INDUSTRIAL SOURCES

Manufacturing and service industries have high demands for cooling water, processing water and water for cleaning purposes. Groundwater pollution occurs when used water is returned to the hydrological cycle. Modern economic activity requires transportation and storage of material used in manufacturing, processing, and construction. Along the way, some of this material can be lost through spillage, leakage, or improper handling. The disposal of wastes associated with the above activities contributes to another source of groundwater contamination. Some businesses, usually without access to sewer systems, rely on shallow underground disposal. They use cesspools or dry holes, or send the wastewater into septic tanks. Any of these forms of disposal can lead to contamination of underground sources of drinking water. Dry holes and cesspools introduce wastes directly into the ground. Septic systems cannot treat industrial wastes. Wastewater disposal practices of certain types of businesses, such as automobile service stations, dry cleaners, electrical component or machine manufacturers, photo processors, and metal platters or fabricators are of particular concern because the waste they generate is likely to contain toxic chemicals. Other industrial sources of contamination include cleaning off holding tanks or spraying equipment on the open ground, disposing of waste in septic systems or dry wells, and storing hazardous materials in uncovered areas or in areas that do not have pads with drains or catchment basins. Underground and above ground storage tanks holding petroleum products, acids, solvents and chemicals can develop leaks from corrosion, defects, improper installation, or mechanical failure of the pipes and fittings. Mining of fuel and non-fuel minerals can create many opportunities for groundwater contamination. The problems stem from the mining process itself, disposal of wastes, and processing of the ores and the wastes it creates.

7.1.5 RESIDENTIAL SOURCES

Residential wastewater systems can be a source of many categories of contaminants, including bacteria, viruses, nitrates from human waste, and organic compounds. Injection wells used for domestic wastewater disposal (septic systems, cesspools, drainage wells for storm water runoff, groundwater recharge wells) are of particular concern to groundwater quality if located close to drinking water wells. Improperly storing or disposing of household chemicals such as paints, synthetic detergents, solvents, oils, medicines, disinfectants, pool chemicals, pesticides, batteries,

gasoline and diesel fuel can lead to groundwater contamination. When stored in garages or basements with floor drains, spills and flooding may introduce such contaminants into the groundwater. When thrown in the household trash, the products will eventually be carried into the groundwater because community landfills are not equipped to handle hazardous materials. Similarly, wastes dumped or buried in the ground can contaminate the soil and leach into the groundwater. Large quantities of organic compounds are manufactured and used by industries, agriculture and municipalities. These man-made organic compounds are of most concern. The organic compounds occur in nature and may come from natural sources as well as from human activities. In many locations groundwater has been contaminated by chemicals for many decades, though this form of pollution was not recognized as serious environmental problem until the 1980s.

7.1.6 GROUNDWATER CONTAMINATION SCENARIO OF NEPAL

There is an overall lack of water-quality data for Nepal and hence assessment of the main quality problems is difficult. Many of the documented problems are related to pollution of both surface waters and shallow groundwater from domestic, agricultural and industrial wastes. Much of the Nepalese population uses surface water for potable supply which is most vulnerable to pollution. Hence only 34% of the population is thought to have access to safe drinking water (NepalNet, 2001). Shallow groundwater is also at risk from contamination: pathogenic bacteria, pesticides, nitrate and industrial effluents (urban and peri-urban areas) are likely to be the greatest problems encountered. Shallow ground waters in the Kathmandu Valley in particular are reported to have been contaminated with industrial and domestic pollutants in recent years 16 (Jacobson, 1996). The nature of the industrial effluents present is not known in detail, but the greatest sources are likely to be from the textiles and carpet-manufacturing industries. These may introduce effluents with high salinity and containing organic chemicals and some trace metals (from dyes and finishing treatments). In Terai, contamination is a natural phenomenon and its mitigation requires a broad approach. Other potential natural groundwater quality problems are associated with high concentrations of dissolved methane, manganese and iron. Diffuse groundwater pollution from agricultural pesticides and fertilizers may also become an issue in the Terai. The chemistry of shallow groundwater in the terai region depends to a large extent on the lithology of the sediments: the shallow aquifers are vulnerable to pollution if surface sediments are sandy and permeable, but less so if a protective layer of low permeability (clay or silt) is present. This also has an impact on the amount of oxygen present in the shallow aquifers,

which in turn will affect the water chemistry. As the shallow aquifer is reported to be largely unconfined, the vulnerability to surface pollution may be relatively high, at least in some areas. However, in some parts of the shallow aquifer of the terai, anaerobic conditions are observed as some shallow groundwater has high concentrations of arsenic iron. Arsenic in the terai ground waters is a newly emerging problem and although no arsenic-related health effects have been recognized in the region, sufficient concern has been raised among the government and NGOs to launch an arsenic and health testing programme.

Deep ground waters present in the Kathmandu Valley and the terai are also largely anaerobic and hence vulnerable to increased concentrations of iron, manganese, ammonium and possibly arsenic. However, to date, no high-arsenic deep ground waters have been documented in these areas. Springs from the karstic limestone aquifers at depth in the Kathmandu Valley are reported to be of calcium-bicarbonate type with good chemical quality, although the amount of data is limited.

7.1.7 NITRATE, NITRITE AND AMMONIUM

In the shallow groundwater, concentrations of nitrate and other pollutants from domestic and agricultural sources may be high and nitrate concentrations could fail WHO guidelines 17 frequently. Groundwater in many of the urban areas, especially Kathmandu, has been contaminated by seepage from septic tanks and soak aways. Ammonium concentrations may also be high in these affected areas from domestic pollution and the use of ammonium-based fertilizers. In the deep aquifers of the Kathmandu Valley, high observed concentrations of ammonium (<3–35 mg/l as N, mostly <4 mg/l) are of natural rather than pollutant origin. The deep aquifers are protected from surface pollutants by the thick overlying layers of poorly permeable sediment (e.g. clay and silt). The high ammonium concentrations are indicative of anaerobic aquifer conditions in the aquifer and are associated with high iron, manganese and occasionally methane. Under the anaerobic conditions, concentrations of nitrate and and<0.01 mg/l asnitrite are low (<1 mg/l as NO₃ respectively; Khadka, 1993). High ammonium concentrations and low nitrate and nitrite concentrations are also likely to be found in the deep anaerobic aquifers of the terai. However, no data are available to indicate the concentration ranges. The WHO guideline for ammonium is set on aesthetic grounds (taste and smell) rather than on health grounds and so the presence of ammonium in drinking water is not believed to be detrimental to health.

7.1.8 IRON AND MANGANESE

Few data exist for these elements in Nepalese groundwater. Concentrations of iron and manganese are likely to be mostly low in the shallow groundwater where the aquifers are aerated. However, they are higher in the deep anaerobic aquifers of the Terai region and Kathmandu Valley. Iron concentrations in the range <0.5–9 mg/l and manganese in the range <0.1–0.7 mg/l have been found in groundwater from the deep aquifers of the Kathmandu Valley (Khadka, 1993). The higher concentrations of these elements render the groundwater unusable without prior treatment. Presence of iron and manganese in the shallow groundwater of the Terai will depend on the degree of aeration of these aquifers. If aerobic, concentrations are expected to be low.

7.1.9 ARSENIC

Arsenic contamination in the Terai region problems might pose a threat to groundwater as well as the management interventions needed. The testing of arsenic contamination in the Terai region was initiated by the Department of Water Supply and Sewerage (DWSS) in 1999 with support from World Health Organization (WHO). This was done only after questions were raised regarding the similarities in conditions between the Terai region and the regions affected by arsenic problem in Bangladesh. Since then, many efforts have been made by agencies involved in rural water supply to assess the occurrence of arsenic in groundwater. Arsenic Testing and Finalization of Groundwater Legislation Project has studied the Arsenic concentration in the

TABLE 2: CLASSIFICATION OF ARSENIC CONCENTRATION							
SN	WDCS HOTSPOTS	DISTRICT	BELOW 10 ppb	11-50 ppb	ABOVE 50 ppb	TOTAL ARSENIC TESTED TW	NUMBER OF TW WITH LOCATION
1	Ramgram N.P.	Nawalparasi	228	95	445	768	740
2	Manari	Nawalparasi	41	36	69	146	143
3	Swathi	Nawalparasi	201	65	68	334	323
4	Tilakpur	Nawalparasi	77	41	52	180	178
5	Sunwal	Nawalparasi	129	31	46	206	202
6	Mahendrakot	Kapilbastu	65	31	38	134	133
7	Jahada	Nawalparasi	224	93	31	348	329
8	Rampur Khap	Rautahat	16	1	28	45	42
9	Devadaha	Rupandehi	57	14	28	99	49
10	Sangrampur	Rautahat	2	7	26	35	18

Figure 14 : Arsenic Study in Groundwater

Rupandehi: The result of the study shown below.

The concentration of the arsenic in the Devadaha are moderate.

Water quality test conducted showed following results.

Table 24 : Water quality study in the Lumbini Sanskritik Municipality

Sample No	Nwp-24	Nwp-25	Nwp-26	Nwp-27
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Location details

RM/Mun	Lumbini Sanskritik	Lumbini Sanskritik	Lumbini Sanskritik	Lumbini Sanskritik
Ward No.	2	3	9	5
Village Name/ Tole	Mujhana	Padariya	Bichauwapur	Moammad Nagar
Source	STW	STW	STW	STW
Owner's Name	WUG	WUG	WUG	WUG
Caretaker's Name	Sajrudhin Dhuniya	Anil Dhabal	Kanhaiya Yadav	Jamanudin Musalman
Depth of water surface (m)	3.04	2.4	2.6	2.7
Northing	3037036	3039595	3044501	3042606
Easting	726897	724176	728354	721662

Physical Properties

pH	7.3	7.6	7.7	7.7
EC $\mu\text{S}/\text{cm}$	540	540	620	540
Eh mV	-53	-41	-38	-43
Temp $^{\circ}\text{C}$	17	16.5	17	17.5

Chemical Properties

Arsenic (As) mg/l	0.02	<0.01	<0.01	0.01
Sodium (Na) mg/l	4.3	9.5	8	5.1
Calcium (Ca) mg/l	63	77.6	19.4	22.6
Magnesium (Mg) mg/l	0.61	1.97	32.4	1.3
Potassium (K) mg/l	1.9	2	3.2	1.8
Hardness (CaCO_3) mg/l	250.5	278.8	181.8	238.4
Alkalinity (HCO_3) mg/l	270.2	301.08	212.3	239.32
Chloride (Cl) mg/l	28.85	11.54	19.23	12.28
Sulfate (SO_4) mg/l	2	3	1	3
Iron (Fe) mg/l	0.61	1.97	2.04	1.3
Ammonia (NH_3) mg/l	0.045	0.027	0.011	0.075
Nitrate (NO_3) mg/l	0.5	0.2	0.2	<0.1
Floride (F) mg/l	0.73	0.91	1.53	0.69

Total Dissolved Solid mg/l	351	351	403	351
SAR	0.1	0.2	0.3	0.1

The table showed the presence of As in concentrations in the Lumbini Sanskritik Municipality which is less than 0.01 mg/l, i.e. lower than the Nepal Standard limit. Thus, the areas do not possess any risk for irrigation from groundwater; however, some pocket areas could possess partial risk of arsenic hazard.

CHAPTER VIII

DTW SYSTEM DESIGN

8.1 NEW PROPOSED PROJECT

Within the project area, there are shallow tubewells and Deep Tubewell being used for irrigation. The depths of shallow wells are about 10-40 meter and depths of Deep Tube well are 65-180 meter.

8.2 DESIGN OF NEW WATER SUPPLY SYSTEM

8.2.1 TUBEWELL CONSTRUCTION

8.2.1.1 DEEP TUBEWELL DESIGN

The hydrogeology of the land will determine the depth of each tube well. The depth of all proposed wells is predicted to be quite consistent, with an average depth of 140 meters. The goal of groundwater irrigation system design is to achieve a balance of extended life, high performance, and low cost. Proper design decreases the risk of well failure and hence increases the likelihood that the well will perform as anticipated. The following are the primary goals of good design:

- To calculate the design yield with minimum drawdown consistent with aquifer capability and economic optimization of the well
- Good quality water with solid-free
- A well with a full life and reasonable capital and operational costs.

The main points to be considered in designing a well are as:

- Selection of proper well location, and selection of appropriate drilling method
- Selection of appropriate construction materials and pump
- Bore size and well size
- Geophysical logging, water quality and test-pumping
- Demand discharge
- Aquifer type
- Pollutant's inflow is prohibited
- Borehole pipes should be resistant to corrosion and sufficient strength to prevent collapse
- Minimum installation and running costs with best well performance.

So, the steps for designing a well are as

- Determine the required well yield
- Identify aquifer type and formation
- Determine dimensions of pump chamber
- Determine screen and filter characteristics
- Determine pump characteristics including stages and permissible discharge

Housing is designed to let the pump hang inside where the sufficient water inflow takes place through the pumps and to the delivery pipes. Well screen is tapped at the intake zone (aquifer) where the water enters the well. The components that need to be specified in a properly designed well include: the diameter of upper well casing (housing) required that is needed to accommodate the pump, with some margin for clearance around the unit. Manufacturers of pump will recommend a “minimum” casing.

The diameter must be large enough for the pump to be a comfortable fit, making allowances for non-verticality of the borehole. A diameter 100 mm larger than the nominal pump diameter is often recommended. Moreover, the casing diameter is also based on the size of the bit used in drilling the borehole. Figure 32 shows the relationship between hole and casing diameter.

Each tube well will have an average depth of approximately 120 m of 250 mm/150 mm dimension. A blind pipe casing of 250 mm (10") in diameter shall be installed for the pump housing, after which the well diameter shall be of 150 mm (6") consisting alternately of blind pipe and continuous slotted screen as per the lithological condition. Artificial gravel pack is required after lowering the pipe assembly if the aquifer material is homogenous.

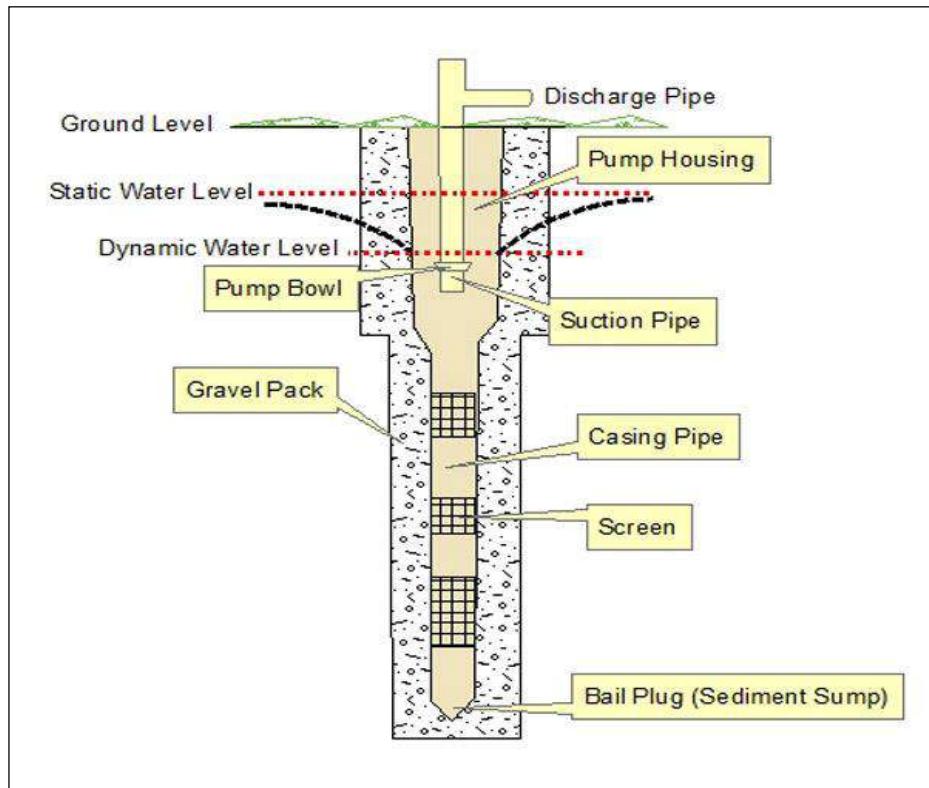


Figure 15 : Schematic Diagram of Deep Tubewell Assembly

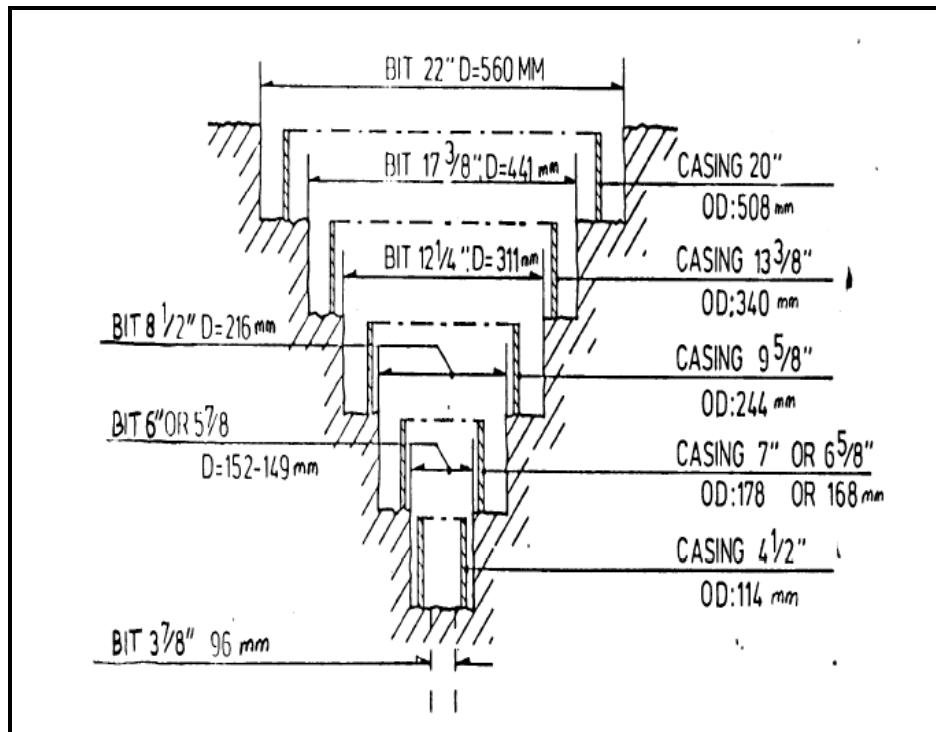


Figure 16 : Relationship between Bore Hole and Casing Diameter.

8.2.1.2 HOUSING LENGTH CALCULATION

The length of the housing is controlled by the requirements of the pump. The pump usually needs to remain submerged, with the minimum submergence recommended by the manufacturer. The depth of the submergence into the water column is depends on the Net Positive Suction Head (NPSH).

Table 25 : Calculation of Pump Housing

SWL	Drawdown	Annual Fluctuation	Total	Safety Factor@30%	Total Probable WL Down	Recommended Pump Housing
M	m	m	m		m	m
10	24	8	42	12.6	54.6	54.6

Static water level of the area is 10 m bgl, drawdown expected based on earlier data DTW is about 24 m, annual fluctuation of water level in the area could be about 8 m and safety factor of 30% gives additional water level fluctuation of 12.6 m (**Error! Reference source not found.**). So possible maximum water level fluctuation after the consideration of annual fluctuation is about 54.6 m bgl.

Based on these data, aquifer encountered beyond 54.6 can be tapped. But additional depth has been provided as a safety from falling peizometric levels due to increased water use in the future, even though calculations give allowance for less depth of pump housing. So, recommended pump housing depth is 54m.

8.2.1.3 SCREEN LENGTH CALCULATION

The minimal entrance velocity, maximum open area, slot size not to let aquifer or gravel pack material in, periodic maintenance, and corrosion resistance are all factors to consider when building a well screen. The best well screen length for a given well is determined by the aquifer thickness, available drawdown, and stratification within the aquifer. Field identification of aquifer selection will be mostly dependent on geophysical records. In most cases, clays and unproductive areas are screened as blank casing. The following are the general guidelines for screen length in restricted aquifers:

- If the aquifer thickness is less than 8 meters, screen 70% of the aquifer.
- If the aquifer thickness is between 8 and 16 meters, screen 75% of the aquifer.
- Screen 80 percent of the aquifer if the thickness is higher than 16 m.

The screen diameter is set to meet the other criteria, and the total area of the screen apertures must be sufficient to keep the entrance velocity within the design parameters. The screen length is computed as follows:

$$S_l = Q / (p * \pi * D * V_e),$$

Where, S_l = Screen Length m, Q =Discharge m³/s, p =percent opening area (15%), D =Diameter of Screen, and V_e =Entrance Velocity m/s (**Error! Reference source not found.**).

Table 26 : Calculation of Screen Length

Diameter of Screen	Velocity of entrance	Percent opening Area	SF for Clogging	π	Discharge	Screen Length
M	m/sec	%	SF		Q	$S_l = Q / (p * \pi * D * V_e) * SF$
D	V_e	p			m^3/sec	M
0.15	0.03	0.15	1.3	3.14	0.031	19.29
Recommended Screen Length						21

Assuming that the opening area of slotted screen is 15%, and entrance velocity to be 0.03 m/sec, the total length of screen is calculated as 19.29 m. Taking into consideration of available length of screen pipes of 3 m, the recommended length of screen is 21 m.

8.2.1.4 WELL DISCHARGE CALCULATION

The discharge of the given well can be calculated by non-equilibrium Thais equation assuming,where H =static head measured from bottom of aquifer, h =depth of water in the well while pumping,

R =radius of influence and r =radius of well.

So, the design discharge of the well is approximately 31.4 LPS (Recommended 3)

Table 27 : Calculation of Well Discharge

Hydraulic Conductivity	Aquifer thickness	Drawdown	Radius of Influence	Well Radius	LOG.10	Discharge [Q= $2.73 * K * b * (H-h) / \log(R/r)$]
m/s	M	m	M	m		m^3/sec
K	b	$H-h$	R	r	$\log(R/r)$	Q
0.00008	22	24.14	500	0.125	3.60	0.031
						31.4

8.2.1.5 VELOCITY AND HEAD CALCULATION

The total head against the pump has to work is the function of head loss due to friction in pipe, velocity head, SWL (Depth to Static Water Level), drawdown (Maximum depression head), delivery head up to the elevated header tank, annual fluctuation in water level in the well and others losses (eg. entry loss in strainer, bends and fittings etc.). So, the head loss due to friction in pipe, Velocity head, and velocity through pipe can be calculated as

Table 28 : Calculation of Velocity and Head

Frictional Coffecient	Length of the Pipe	Acceleration due gravity	Diameter of Pipe	Discharge	Xn Area	Velocity through Pipe	Firctional Head	Velocity Head
F	L	g	D	Q	A	V	H_f	H_v
					$A=\pi^* r^2$	Q/A	$4f*L*V^2/2g$	$V^2/2*g$
0.006	42	m/sec^2	m	m^3/s	m^2	m/s	m	m

8.2.1.6 DRAWDOWN CALCULATION

It is difficult to predict the exact static water level (SWL) for all DTWs of the project. However, according to the information and observations within the area it is assumed that the static water level in the project area lies approximately below 10 m. So, SWL of the project area has been taken as 24.14 m bgl . Hydraulic losses due to flow in the aquifer and hydraulic losses due to flow into and above the well are responsible for drawdown in the well. The aquifer loss is inversely proportional to Transmissivity (T) and hence to the product of constant permeability (Hydraulic Conductivity K) and the yielding aquifer thickness (D).

$$T=K*D=K* F_n \{L\}$$

Therefore, as L (thickness of aquifer) increases, T also increases and therefore the drawdown decreases. Similarly, hydraulic losses due to flow into and up the well are function of screen (length, open area and diameter etc.), gravel pack and efficiency of the well. As given by Logan's approximation:

$$\text{Drawdown} = S = 1.32 * Q / (K * L)$$

Where, S = Drawdown (m), Q = Well discharge (m³/day), K = Hydraulic Conductivity (0.4 to 204 m/day in natural aquifers), L=Screen Length (m)

Table 29 : Drawdown Computation

Hydraulic Conductivity	Discharge	Screen Length	Drawdown	Logan's approximation
m/day	M ³ /day	m	S	
K	$Q=30 \text{ LPS}$	S_L	$1.32 * Q / (K * S_L)$	
6.75	2592	21.00	24.14	

8.2.1.7 GRAVEL PACK

For formations of fine sands and silts the aquifer must be prevent from infall of aquifer material. It is not usually practicable to have very small slot sizes, and so an artificial gravel pack is selected which forms the correct size of pore opening and prevent the inflow. Use of a gravel pack in a fine formation enables the screen opening to be considerably larger than the aquifer grain size. There is a consequent reduction in head loss. The gravel pack adjoining the screen consists of larger sized particles than the surrounding formation, and hence larger voids are formed at and close to the screen allowing water entry nearly free from head loss. Necessary conditions for a gravel pack are:

- Sand-free operation after development,
- Highest permeability with stability (low resistance),
- Low entrance velocities,
- Efficient service life, i.e., resistant to chemical attack.

Artificial gravel pack is also known as gravel filter pack, graded envelope, the gravel pack is intended to fulfill the following functions:

- To support the aquifer and prevent inflow of material
- To laterally restrain the casing
- To prevent the movement of fine aquifer material into the well.
- The normal approach is to use a filter pack when:
- The uniformity coefficient < 3;

- The aquifer is fine, with D10 of the formation < 0.25 mm.

Gravel should be clean, have well-rounded to sub-rounded grains, Free from water soluble compounds such as carbonates (siliceous sands and gravels) and be well graded to ensure its function as designed. In theory, a pack thickness of 2 or 3 grains is all that is required to retain formation particles. In practice around 10 cm is used to ensure an envelope around the well. Upper limit of thickness of the gravel pack is 20 cm; otherwise, well development becomes too difficult, and cost of drilling escalates. Packs with a thickness of less than 5 cm are simply formation stabilizers, acting to support the formation, but not effective as a filter.

8.2.2 SUBMERSIBLE PUMP DESIGN

The most critical situation in the design of a submersible pump is when the maximum possible dynamic groundwater level in the well falls lower than the provided pump casing depth. The total head includes losses in the non-return valve, bends and the pump mechanism in addition to the calculated drawdown and delivery losses in the distribution network if any. There is still sufficient margin for future increase in drawdown due to possible extensive use of groundwater in the area. On this basis, the capacity of the required pump is calculated as in **Error! Reference source not found..**

$$\text{Power of pump} = \frac{\rho * g * Q * H}{n_p}$$

Where, ρ = unit weight of fluid being pumped in Kg / m³, Q = required design discharge of the tube well in cusec, g = gravitational constant (9.81 m / s²), n_p = efficiency taken as (0.75), H = total head in metres against which the pump must work

Table 30 : Calculation for Capacity of Pump

Density of water	Acceleration due to gravity	Total head	Efficiency	Discharge	Power of Pump $P=[(\rho*g*Q*H)/\eta]$
kg/m ³	m ² /s	m	%	m ³ /s	watt
P	g	H	η	Q	P
1000	9.81	50	0.75	0.031	20638.62
Providing 10% of excess allowance					22702.29
Capacity of Pump KW					22.70
Capacity of Pump HP					30.43
Say HP					35

Hence the capacity of pump is recommended to be 35-40 HP.

8.2.3 ELECTRIFICATION

To assess the maximum power demand, if required, the maximum KVA for the well for n numbers of pump is given by,

$$\text{Maximum KVA demand} = \frac{\text{Input KW per pump} \times n}{\text{power factor}}$$

Table 31 : Calculation of Power Demand

Total Head	Acceleration due to gravity	Discharge	Pump Efficiency	Safety factor	Power of Pump	Power Factor	Number of pump	KVA demand
M	m ² /sec	M ³ /s	%	@ 10%	kw	%	nos	(ip * n)/pf*sf
H	g	Q	n	sf	ip	pf	N	
50	9.81	0.0314	0.75	1.1	22.17	0.8	1	31.22

Available transformer capacities in the market are in the standard rating of 25KVA, 50KVA, 100KVA and so on. Hence matching transformer capacity for the project as per the power consumption of the pump is 50 KVA for each deep tube well unit.

Table 32 : Calculation of head

Friction loss	Draw down	Velocity head	SWL	Annual Fluctuation	Other losses	Delivery Head	Total head
m	m	M	m	m	m	m	m
hf	S	R	SWL	Af		Dh	H
1.09	24.14	0.16	10	8	0.8	6	50.18

CHAPTER IX

CONCLUSION & RECOMMENDATION

9.1 CONCLUSION

This report of "Study of Groundwater Status of Lumbini Sanskritik Municipality" was conducted following standard practices to best meet the objectives and scope. The aim is to produce deep as well as shallow tube well potential maps and Hydrogeological condition of the area and water quality. The DTW data collected during field study are mainly constructed under Groundwater Irrigation Project and sample survey of area. This area has abundant groundwater resources that can be utilized for drinking and irrigation purposes. The hydrogeologic setting of the entire Terai region, including the study area, indicates the presence of deep aquifers with good water discharge potential throughout the year. This suggests that there is a significant potential for utilizing groundwater resources through the construction of tube wells to provide reliable irrigation water to the project area. The depth of 14 m is sufficient for drinking water purposes. There is arsenic occurrence in the groundwater within the study area.

In the sampled ward of 2,3 5, and 9 As in groundwater is less than 0.01 mg/l, i.e. lower than the Nepal Standard limit. Thus, the areas do not possess any risk for irrigation from groundwater; however, some pocket areas could possess partial risk of arsenic hazard.

Furthermore it has been found from the sample survey data that more person are shifting towards deep tube wells in present scenario. Hence in order to preserve ground water in the area, it is highly recommended to construct recharge pond in favorable locations in discussions with the locals,

9.2 RECOMMENDATION

It is recommended to conduct vertical electricity sounding (VES) at each well site prior to drilling in order to ensure the drilling depth and for precise cost estimation. The resistivity sounding can provide hydrogeological information that is necessary for choosing the appropriate screened length for the well. This information can help optimize the well design and ensure that the well is constructed to meet the project's objectives in an efficient and cost-effective manner.

Investigation wells can provide a more accurate assessment of groundwater resources and can help identify potential issues with the aquifer and groundwater quality before drilling production wells. The detailed studies should be carried out with long term monitoring of water quality variation.

ANNEXES

ANNEX A : Statistical summary of the physicochemical parameters of groundwater samples from the study area

ANNEX B : Sample Survey data for Depth and Discharge

ANNEX C : Field Photographs

ANNEX D : Survey Data from the Field

ANNEX A

***STATISTICAL SUMMARY OF THE PHYSICOCHEMICAL
PARAMETERS OF GROUNDWATER SAMPLES FROM THE STUDY
AREA***

Annex A

Statistical summary of the physicochemical parameters of groundwater samples from the study area

Parameters	Range	Mean	Standard deviation	Median	WHO	NDWQS	Samples not within limit	
					guidelines	guidelines	Number	%
Groundwater (N = 180)								
pH	5.00–8.59	6.953	0.595	6.99	6.5–8.5	6.5–8.5	34	19.43
Temp (°C)	17.0–35.9	27.721	4.606	28.5	—	—	—	—
EC (µS/cm)	14.8–1898.0	445.5	264.949	436	—	1500	-1	-0.57
Turbidity (NTU)	0.00–149.00	12.729	21.756	3.29	5	5	78	44.57
Color (Hazen)	0.01–4.10	0.219	0.461	0.11	15	5	0	0
TDS (mg/L)	7.50–949.00	231.034	128.581	224	1000	1000	0	0
F [−] (mg/L)	0.02–1.10	0.235	0.216	0.16	1.5	0.5–1.5	0 (152) (86.86)	0
NH ₃ (mg/L)	0.05–3.36	0.477	0.44	0.38	1.5	1.5	6	3.43
NO ₃ (mg/L)	0.05–3.38	0.266	0.569	0.05	50	50	0	0
Cl [−] (mg/L)	0.50–161.8	17.011	29.464	3.5	250	250	0	0
TH (mg/L)	1.11–510.00	191.644	87.865	205.35	—	500	-1	-0.57
CH (mg/L)	1.00–412.62	118.856	66.097	116.23	—	—	—	—
TA (mg/L)	2.36–512.40	197.678	89.929	213.06	500	—	1	0.57
Fe (mg/L)	0.05–23.10	1.836	3.642	0.46	0.3	0.3	107	61.14

Parameters	Range	Mean	Standar d deviation	Media n	WHO guideline s	NDWQS guideline s	Samples not within limit	
							Numbe r	%
Mn (mg/L)	0.05–3.10	0.367	0.486	0.21	—	0.2	-88	-50.28
As (mg/L)	0.005–0.50	0.005	0.003	0.005	0.01	0.05	1 (0)	0.57 (0)
Ca2+ (mg/L)	0.00–165.05	45.137	26.218	41.281	—	200	0	0
Mg2+ (mg/L)	0.00–61.49	18.523	12.632	16.28	—	—	—	—

ANNEX B

SAMPLE SURVEY DATA FOR DEPTH AND DISCHARGE

Tube Well Depth with Co-ordinates at Ward No 1							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth (ft)	Remarks
401	Khungai (Public)	3038161	723177	77	0.5	60	
402	Ashok Patwor	3038167	723177	78	0.31	150	
403	Kailash Dhobi	3038156	723192	78	0.46	60	
404	Aafat Dhobi	3038148	723186	79	0.4	170	
405	Pingan Dhobi	3038145	723190	79	0.2	27	
406	Pancham Dhawal	3038138	723191	79	0.23	90	
407	Parsuram Dhadi	3038131	723176	78	0.2	140	
408	Ramniwas Yadav	3038124	723180	79	0.28	80	
409	Suresh Kurmi	3038119	723176	79	0.26	85	
410	Durgesh Kurmi	3038109	723214	81	0.38	120	
411	Ramchandra Kurmi	3038124	723214	81	0.19	180	
412	Satish Sukla	3038120	723230	83	0.25	80	
413	Shreepati Kurmi	3038130	723231	83	0.22	175	
414	Ram Temple	3038139	7232141	83	0.19	175	
415	Mahesh Kahar	3038140	723240	83	0.15	175	
416	Alakh Nirjan Kurmi	3038136	723253	86	0.22	80	
417	Rohit Kurmi	3038131	723259	85	0.21	160	
418	Amarkesh Kurmi	3038119	723286	86	0.2	60	
419	Sarwajit Kurmi	3038109	723269	85	0.18	65	
420	Ramsewak Kurmi	3038117	723264	86	0.21	65	
421	Bhagoti Kurmi	3038102	723270	86	0.38	65	
422	Dilip Kurmi	3038119	723280	86	0.43	60	
423	Sadaprish Kurmi	3038101	723278	84	0.2	165	
424	Nandkishor Bishwokarma	3030089	723290	84	0.23	160	
425	Ramchandra Sharma	3038103	723309	84	0.29	55	
426	Kali Temple	3038101	723340	83	0.33	65	
427	Kali Temple	3038114	723339	83	0.41	65	
428	Rajesh Chaye	3038065	723305	83	0.19	150	
429	Manoj Kurmi	3038061	723307	83	0.3	65	
430	Laxman Harijan	3038062	723318	81	0.36	120	
431	Kharidan Harijan	3038055	723320	82	0.58	35	
432	Malahu Chamar	3038047	723319	82	0.28	60	
433	Haridan Harijan	3038038	723309	81	0.15	160	
434	Ramayan Chamar	3038038	723319	81	0.14	104	
435	Chulaye Harijan	3038021	723324	81	0.15	95	
436	Balram Harijan	3038021	723316	80	0.26	95	
437	Ramlakhan Maharjan	3038043	723294	80	0.16	200	
438	Ghuse Harijan	3038045	723281	80	0.12	95	
439	Dharmendra Harijan	3038048	723275	79	0.17	140	
440	Jogindra Hrijan	3038064	723278	79	0.15	95	
441	Ramgahare Hrijan	3038059	723262	80	0.35	330	
442	Shivcharan Hrijan	3038054	723262	79	0.29	185	
443	Om Prakash Harijan	3038055	723257	78	0.46	120	
444	Binod Harijan	3038048	723248	78	0.43	130	
445	Raju Harijan	3038036	723234	78	0.15	80	
446	Taulan Harijan	3038032	723236	78	0.5	85	
447	Sadal Harijan	3038024	723251	78	0.28	85	
448	Sawatar Harijan	3038058	723241	78	0.31	85	

Tube Well Depth with Co-ordinates at Ward No 1							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth (ft)	Remarks
449	Ganharam Baniya	3038060	723226	77	0.29	150	
450	karan prasad Harijan	3038061	723220	76	0.7	75	
451	Dahu Dari	3038063	723212	76	0.2	140	
452	Ram Lakan Baniya	3038077	723234	77	0.25	45	
453	Bhulayee Dahi	3038075	723206	76	0.2	190	
454	Gobind Naru	3038084	723209	76	0.18	70	
455	Sursati Dari	3038097	723164	76	0.46	75	
456	Dhanraj Dari	3038082	723171	75	0.17	160	
457	Raksharam Kurmi	3038145	723234	76	0.33	25	
458	Shankar Bari	3038169	723220	77	0.58	25	Khungai
459	Bhulayee Kahar	3038190	723209	77	0.13	120	
460	Ram Sumer Kurmi	3038200	723218	78	0.15	120	
461	Legadu Sunar	3038211	723220	77	0.7	25	
462	Sher Ali	3038219	723227	77	0.58	35	
463	Ashok Patba	3038237	723228	77	0.21	100	
464	Ram Lautan Pathar	3038243	723226	77	0.21	25	
465	Shyam Lautan Pathar	3038248	723231	77	0.25	135	
466	Hari Prasad Kurmi	3038261	723241	81	0.21	120	
467	Paras Barhi	3038265	723240	80	0.23	30	
468	Irsad Ali	3038258	723269	79	0.2	30	
469	Mohamad Ajij	3038256	723266	79	0.26	22	
470	Gais Ali	3038263	723269	79	0.38	40	
471	Ajid Ali	3038264	723273	78	0.33	90	
472	Pralad Kurmi	3038298	723273	78	0.14	100	
473	Shinu Teli	3038287	723267	78	0.26	100	
474	Gangaram Teli	3038292	723258	78	0.16	130	
475	Sugrib Kurmi	3038294	723246	77	0.2	150	
476	Raj Kumar Kurmi	3038307	723258	77	0.77	25	
477	Fulchand Kurmi	3038309	723262	77	0.38	90	
478	Sugrim Kurmi	3038312	723266	77	0.7	35	
479	Mnohar Kurmi	3038316	723268	77	0.1	90	
480	Bikash Malai	3038328	723273	76	0.24	150	
481	Ram Sumuj Malai	3038330	723267	76	0.63	25	
482	Ram Kumar Malai	3038329	723262	77	0.77	20	
483	Abdul Mobin	3038332	723251	76	0.23	120	
484	Bhulayee Kahar	3038344	723237	76	0.53	150	
485	Shiv Mangal Lohar	3038359	723232	76	0.33	90	
486	Radhe Mangla	3038360	723218	75	0.25	150	
487	Tichung Mangla	3038357	723210	75	0.15	120	
488	Ram Prasad Kohar	3038349	723212	75	0.25	40	
489	Saman Dhoniya	3038342	723214	75	0.14	25	
490	Ahamad Ali	3038337	723218	75	0.58	35	
491	Ramjan Ali	3038332	723218	75	0.054	140	
492	Akbar Ali Dhuniya	3038322	723222	75	0.19	140	
493	Sajurudin Ali Dhuniya	3038325	723211	75	0.18	200	
494	Saburu Nisha Musalman	3038336	723226	74	0.77	25	
495	Dilip Jaiswal	3038319	723231	74	0.29	150	
496	Rafik Dhuniya	3038311	723227	74	0.26	130	

Tube Well Depth with Co-ordinates at Ward No 1							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth (ft)	Remarks
497	Abdul Majij Dhuniya	3038318	723224	74	0.2	152	
498	Maharu Nisha	3038306	723240	74	0.23	120	
499	Nasir Ahamad	3038315	723242	74	0.5	130	

Tube Well Depth with Co-ordinates at Ward No 2							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
501	Gobind Yadav	3037514	725249	55	0.38	170	
502	Dhanpat Yadav	3037504	725249	56	0.38	160	
503	Nandu Yadav	3037497	725250	56	0.25	150	
504	Tuntun Fakir	3037469	725239	57	0.43	170	
505	Bhulan Harrijan	3037461	725253	58	0.33	165	
506	Palaj Yadav	3037451	725249	59	0.29	160	
507	Chinak Chamar	3037446	725240	59	0.11	40	
508	Taulan Yadav	3037439	725217	59	0.089	165	
509	Baliram Yadav	3037428	725235	60	0.15	165	
510	Jay Karan Prasad Yadav	3037407	725216	60	0.21	175	
511	Prabhu Yadav	3037379	725230	61	0.36	170	
512	Pralad Yadav	3037361	725214	62	0.29	160	
513	Dhurba Yadav	3037364	725209	62	0.13	161	Kewatalya
514	Santaram Yadav	3037367	725192	62	0.23	140	
515	Ramjit Yadav	3037358	725197	64	0.25	40	
516	Ladu Kahar	3037352	725192	64	0.2	150	
517	Ramkisun Yadav	3037365	725180	64	0.58	50	
518	Ram Nayan Chaudhary	3037331	725180	65	0.23	160	
519	Sugrib Yadav	3037323	725199	65	0.2	100	
520	Sim Rayan Kurmi	3037316	725174	66	0.31	185	
521	Sugane Yadav	3037327	725146	66	0.24	175	
522	Ram Milan Kurmi	3037306	725144	66	0.4	165	
523	Kishor Yadav	3037293	725147	66	0.41	160	
524	Bal Kisun Yadav	3037283	725136	66	0.25	90	
525	Gaurishankar Yadav	3037279	725136	67	0.46	60	
526	Dhanraj Yadav	3037261	725128	67	0.38	125	
527	Banarasi Yadav	3037260	725135	66	0.16	125	
528	Ram Dev Yadav	3037265	725141	67	0.29	125	
529	Manish Kahar	3037066	726893	87	0.38	45	
530	Dipendra Gupta	3037074	726886	87	0.29	45	
531	Babulal Teli	3037074	726862	84	0.23	45	
532	Buddham Gupta	3037057	726878	84	0.58	45	
533	Ganesh Gupta	3037050	726897	84	0.58	50	
534	Kuhush Dhuniya	3037039	726879	85	0.46	40	
535	Gyasudhin Dhuniya	3037039	726896	83	0.7	40	
536	Samsdhin Dhuniya	3037040	726904	83	0.53	40	
537	Sajrudhin Dhuniya	3037036	726897	83	0.53	40	Mujhana
538	Rajaram Paswan	3037038	728663	84	0.43	45	
539	Bhagwan Das	3037032	726876	83	0.26	45	
540	Mangal Thakur	3037027	726857	83	0.28	45	
541	Rajendra Prasad Teli	3037010	726858	83	0.23	45	
542	Surendra Prasad Teli	3037004	726856	83	0.25	45	
543	Prabhu Kurmi	3036988	726849	83	0.16	45	
544	Bechan Kurmi	3036984	726854	83	0.21	40	
545	Dhurba Gupta	3036972	726795	84	0.46	40	
546	Dharmendra Gupta	3036969	726790	84	0.43	45	
547	Pandohi Kohar	3036977	726791	83	0.5	45	
548	Songati Kohar	3036975	726785	84	0.26	45	
549	Mubark Dhoiya	3036971	726778	84	0.38	35	
550	Makbul Dhoniya	3036950	726770	83	0.5	35	

Tube Well Depth with Co-ordinates at Ward No 2							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
551	Asigar Ali	3036990	726771	83	0.36	45	
552	Dharmendra Baniya	3036959	727673	84	0.36	50	
553	Sanjay Kumar Baniya	3036962	726763	84	0.33	33	
554	Ebarat Dhuniya	3036985	726762	83	0.35	45	
555	Toli Dhuniya	3036994	726765	83	0.38	45	
556	Saukat Dhuniya	3036997	726765	83	0.58	45	
557	Anil Pasi	3036960	726748	84	0.53	45	
558	Harish Chandra Baniya	3036976	726740	84	0.15	45	
559	Abdul Rhid Dhuniya	3036956	726732	85	0.12	40	
560	Naresh Yadav	3036961	726725	85	0.31	45	
561	Bijay Nath Yadav	3036960	726723	85	0.22	230	
562	Durgesh Yadav	3036961	726717	85	0.28	40	
563	Jay Shree Kohar	3036962	726705	85	0.15	45	
564	Ram Subhar Kohar	3036942	726704	86	0.5	42	
565	Laxman Dhobi	3036947	726696	85	0.41	45	
566	Thage Pasi	3036935	726707	86	0.35	40	
567	Thage Pasi	3036934	726710	86	0.5	35	
568	Sadhu Pasi	3036926	726707	86	0.41	35	
569	Nirmohi Lohar	3036917	726706	86	0.38	35	
570	Shoelesh Bishwokarma	3036916	726702	85	0.53	45	
571	Dilip Kumar Yadav	3036904	726691	85	0.53	40	
572	Ram Chandra Yadav	3036911	726684	85	0.53	40	
573	Chunilal Bishwokarma	3036910	726692	84	0.5	45	
574	Pralad Yadav	3036890	726699	84	0.26	45	
575	Indrajit Yadav	3036872	726687	84	0.53	45	
576	Kapildev Yadav	3036874	726676	83	0.41	45	
577	Kapildev Yadav	3036901	726706	84	0.5	40	
578	Babulal Yadav	3036901	726709	84	0.36	40	
579	Ram Chandra Yadav	3036900	726716	84	0.53	40	Bhujhiya
580	Gobind Yadav	3036891	726721	84	0.36	40	
581	Hari Bahadur Yadav	3036881	726724	83	0.29	160	
582	Rajaram Yadav	3036838	726717	83	0.63	40	
583	Rajaram Yadav	3036863	726708	82	0.53	40	
584	Chhedi Banya	3036865	726730	83	0.31	30	
585	Ghanshyam Ahir	3036852	726728	83	0.33	40	
586	Ghanshyam Banya	3036867	726746	83	0.39	45	
587	Anup Kumar Yadav	3036846	726742	83	0.36	35	
588	Santaram Kurmi	3036841	726748	84	0.31	40	
589	Thage Nau	3036830	726752	84	0.38	45	
590	Khaderi Nau	3036817	726743	84	0.36	45	
591	Hari Chandra Pasi	3036797	726746	83	0.25	45	
592	Ramu Lodh	3036763	726743	83	0.35	40	
593	Khesari Lodh	3036761	726735	82	0.3	35	
594	Sitaram Lodh	3036762	726723	82	0.36	30	
595	Shambhu Pasi	3036783	726764	84	0.28	45	
596	Wahal Gupta	3036876	726777	83	0.28	45	
597	Ram Ganesh Gupta	3036792	726787	84	0.23	205	
598	Ram Ganesh Gupta	3036792	726787	83	0.5	45	
599	Sukai Gupta	3036793	726791	83	0.58	35	
600	Phulchand Lodh	3036807	726780	84	0.38	45	

Tube Well Depth with Co-ordinates at Ward No 3							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
1	Raju Khan	3039645	724067	117	0.28	160	
2	Nirmala Khatun	3039642	724051	115	0.3	160	
3	Basir Khan	3039630	724068	113	0.25	160	
4	Turma Khan	3039628	724074	114	0.22	160	
5	Islam Nau Musalman	3039650	724093	112	0.25	160	
6	Rakesh Bishwakarma	3039632	724098	112	0.31	160	
7	Pawan Thakur	3039615	724109	111	0.31	160	
8	Shiv Prashad Nau	3039605	724115	110	0.3	160	
9	Shiv Prashad Dhabal	3039589	724150	107	0.26	160	
10	Anil Dhabal	3039595	724176	105	0.3	160	Padariya
11	Nisar aahamad	3039647	724135	102	0.29	150	
12	Abdul kaiush	3039658	724027	100	0.15	180	
13	Ajir aahamad	3039678	724025	98	0.29	160	
14	Hajul Rhaman	3039693	724018	95	0.2	160	
15	Angad Dhobi	3039709	724015	94	0.33	160	
16	Sajrudhin Musalman	3039728	724026	92	0.35	160	
17	Mehabub dhin Musalman	3039724	724016	92	0.16	160	
18	Kanhaiya Yadav	3039728	723971	91	0.17	160	
19	Aalok Yadav	3039745	723991	89	0.19	160	
20	Raju Musalman	3039747	723981	89	0.28	180	
21	Jalin Fakir	3039730	723977	90	0.19	160	
22	Manulah Musalman	3039749	724003	89	0.26	160	
23	Samsulaah Musalman	3039767	723998	89	0.21	165	
24	Abdullah Musalman	3039774	724009	89	0.31	120	
25	Najabudin Musalman	3039785	723994	89	0.19	160	
26	Rahat Husen Musalman	3039788	724013	89	0.16	160	
27	Wajit Ali Musalman	3039794	723993	88	0.41	160	
28	Abdullah Wajit Musalman	3039804	724011	89	0.41	160	
29	Sunil Dhawal	3039812	723996	88	0.2	160	
30	Sahid Dhwal	3039822	724005	88	0.36	160	
31	Fhul Jahan Musalman	3039801	724044	88	0.29	160	
32	Pala Dhobi	3039798	724051	88	0.17	160	
33	Samsulaah kamar Musalman	3039289	723222	89	0.38	80	
34	Hajrat Ali Musalman	3039282	723218	88	0.5	80	
35	Mahbub Aalam	3039262	723203	88	0.3	120	
38	Ahbid Ali	3039258	723178	86	0.5	120	
39	Jalekha Khatun	3039276	723147	87	0.46	120	
40	Wajhul kawar	3039292	723153	88	0.38	80	
41	Mohamad Umar	3039300	723148	88	0.41	80	
42	Balikaran Lohar	3039314	723150	86	0.35	60	
43	Matiulla Musalman	3039327	723139	87	0.25	70	
44	Raphik Khan	3039342	723150	86	0.33	65	Sano
45	Hakikulla Musalman	3039361	723201	87	0.175	60	Padariya
46	Mobin Ahamad	3039305	723136	87	0.26	70	
47	Rabiya Khatun	3039298	723119	88	0.41	90	
48	Jamil Khan	3039282	723083	86	0.35	80	
49	Rahimudin Khan	3039396	723071	85	0.43	70	
50	Gadesh Natuwa	3039298	723036	84	0.58	40	
51	Rajesh Natuwa	3039324	723041	84	0.38	35	
52	Kapil Musalman	3039294	723058	84	0.21	60	
53	Ruwab Ali	3039278	723075	84	0.36	85	

Tube Well Depth with Co-ordinates at Ward No 3							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
54	Sher Mohamad	3039266	723068	84	0.46	85	
55	Ashograli Musalman	3039280	723033	82	0.31	160	
56	Shyamshun Isha	3039254	723057	81	0.41	120	
57	Amirulla Musalman	3039211	723060	80	0.46	75	
58	Modim Khan	3039241	723065	80	0.41	70	
59	Sahabulla Musalman	3039221	723051	80	0.35	80	
60	Barish Ali	3039194	723042	79	0.25	80	
61	Niyaj Ahamad	3039184	723043	78	0.3	70	
62	Nashir Mohamad	3039202	723031	78	0.41	90	
63	Shipujan Natuwa	3039216	723090	78	0.46	90	
64	Bashudev Lodh	3039238	723132	92	0.5	75	
65	Jokhan Lodh	3039244	723154	77	0.5	135	
66	Abdul Wahab	3039241	723175	76	0.35	155	
67	Ram Shankar Lodh	3039665	725490	75	0.22	160	
68	Shiv Kumar Lodh	3039666	725493	76	0.33	160	
69	Shiv Kumar Lodh	3039657	725497	75	0.36	160	
70	Raju Lodh	3039652	725501	75	0.41	160	
71	Jay Ram Lodh	3039607	725517	75	0.31	180	
72	Jagdish Lodh	3039604	725518	75	0.33	180	
73	Kanhaiya Lodh	3039587	725530	75	0.38	130	
74	Ram Abatar Lodh	3039570	725583	74	0.32	130	
75	Shukra Raj Lodh	3039554	725558	74	0.22	130	Lankapur
76	Kishun Lodh	3039533	725584	74	0.21	170	
77	Kishun Lodh	3039515	725594	73	0.24	180	
78	Binod Lodh	3039499	725609	73	0.31	180	
79	Budha Ram Lodh	3039492	725631	72	0.36	165	
80	Radheshyam Lodh	3039490	725643	73	0.87	185	
81	Hushen Lodh	3039471	725659	73	0.43	185	
82	Dharmendra Lodh	3039430	725721	74	0.28	160	
83	Chhedi Yadav	3039440	725735	71	0.36	160	
84	Pujan Yadav	3039418	725776	73	0.41	160	
85	Jagdish Yadav	3039411	725772	73	0.28	170	
86	Bal Dev Yadav	3039416	725795	72	0.43	120	
87	Hari Chandra Yadav	3039399	725800	73	0.25	140	
88	Shirpat Yadav	3039393	725796	73	0.23	190	
89	Hareram Yadav	3039387	725794	73	0.23	180	
90	Shambhu Lodh	3039377	725803	74	0.41	160	
91	Purnwashi Lodh	3039359	725795	73	0.25	140	
92	Gangaram Lodh	3039348	725821	73	0.31	165	
93	Santaram Lodh	3039341	725854	73	0.14	165	
94	Tilak Nath Lodh	3039344	725846	73	0.36	165	
95	Sunar Lodh	3039334	725860	73	0.33	190	
96	Sarbajit Lodh	3039323	725861	73	0.2	160	
97	Jagdish Lodh	3039320	725904	73	0.29	170	
98	Ram Chandra Lodh	3039318	725938	73	0.31	170	
99	Rajendra Lodh	3039296	725891	74	0.41	170	
100	Jit Bahadur Yadav	3039275	725906	74	0.26	150	

Tube Well Depth with Co-ordinates at Ward No 4							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
300	Kailash Pati Ahirin	3040113	720847	50	0.15	160	
301	Radhe Shyam Ahir	3940118	720838	51	0.13	120	
302	Binod Ahir	3040101	720815	52	0.2	35	
303	Ram Shankar Mishra	3040127	720803	53	0.3	120	
304	Jogendra Nath Mishra	3040137	720805	54	0.21	150	
305	Shyam Sundar Teli	3040108	720801	55	0.25	180	
306	Mantaram Yadav	3040119	720798	56	0.2	120	
307	Grijesh Yadav	3040116	720790	57	0.2	120	
308	Laxmi Narayan Kurmi	3040125	720791	57	0.21	160	
309	Bahadur Kurmi	2040147	720788	58	0.35	160	
310	Raksha Ram Kurmi	3040151	720775	60	0.22	160	
311	Bharat Bhuwal Yadav	3040125	720772	59	0.26	120	
312	Manhaura Tole (Public)	3040102	720760	60	0.22	160	
313	Suryalal Chauhan	3040143	720742	62	0.28	170	
314	Rupaur Chauhan	3040147	720740	61	0.23	170	
315	Jitendra Yadav	3040136	720746	64	0.14	120	
316	Bekaru Dhobi	3040161	720752	62	0.24	160	
317	Dilip Upadhaya	3040125	720737	65	0.2	120	
318	Ram Narayan Yadav	3040127	720753	65	0.15	110	
319	Ram Mohan Banya	3040102	720736	65	0.24	160	
320	Pintu Banya	3040095	720730	66	0.19	120	
321	Trilok Gupta	3040081	720744	66	0.21	150	
322	Muniram Gupta	3040082	720735	68	0.14	160	
323	Badri Banya	3040076	720725	67	0.2	120	
324	Aarti Banya	3040069	720722	68	0.41	120	
325	Bimla Banya	3040066	720712	69	0.35	120	
326	Rajaram Banya	3040067	720726	69	0.14	120	
327	Ram Naresh Banya	3040053	720720	71	0.23	160	
328	Enamulala Gaddi	3040063	720704	71	0.38	160	
329	Gobind Kurmi	3040049	720797	71	0.29	130	
330	Manan Gaddi	3040022	720702	72	0.33	160	
331	Gobind Kurmi	3040025	720687	72	0.35	130	
332	Jibachh Yadav	3039976	720720	72	0.28	110	Manaura
333	Ramjanki Temple	3040043	720678	74	0.16	120	Tole
334	Om Prakash Pandey	3040075	720690	75	0.35	110	
335	Ses Man Pandey	3040086	720681	76	0.35	160	
336	Ses Man Pandey	3040074	720671	77	0.38	160	
337	Rajendra Kahar	3040080	720701	77	0.33	110	
338	Mathura Prasad Pandey	3040091	720697	78	0.18	120	
339	Bijaynath Pandey	3040160	720698	78	0.2	110	
340	Adalya Launiya	3040113	720690	79	0.26	100	
341	Durgesh Launiya	3040118	720688	79	0.2	100	
342	Umesh Prasad Sukla	3040099	720680	79	0.28	125	
343	Umesh Prasad Sukla	3040115	720671	79	0.17	120	
344		3040120	720687	79	0.31	110	
345	Bindeshwori Chauhan	3040120	720712	81	0.14	160	
346	Pingal Launiya	3040130	720714	80	0.3	120	
347	Ram Mahesh Launiya	3040140	720709	82	0.21	120	
348	Mira Banya	3040150	720706	82	0.28	130	

Tube Well Depth with Co-ordinates at Ward No 4							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
349	Prameshwor Banya	3040158	720714	81	0.35	120	
350	Hawaldar Launiya	3040136	720696	82	0.15	160	
351	Pancham Bishokarma	3040139	720699	82	0.2	120	
352	Chhablulal Launiya	3040139	720684	83	0.25	160	
353	Mahatam Bishwokarma	3040142	720679	82	0.23	120	
354	America Launiya	3040138	720676	82	0.23	160	
355	Bichan Ahir	3040143	720676	83	0.33	120	
356	Bhola Pasi	3040141	720663	82	0.35	125	
357	Maniram Teli	3040155	720647	82	0.22	120	
358	Binod Pasi	3040167	720646	82	0.25	160	
359	Santaram Pasi	3040170	720651	82	0.24	160	
360	Madan Pasi	3040174	720657	82	0.22	160	
361	Bechan Yadav	3040181	720658	82	0.29	130	
362	Subash Pasi	3040193	720671	82	0.33	30	
363	Bahadur Pasi	3040161	720677	84	0.2	135	
364	Baburam Lohar	3040155	720687	84	0.36	130	
365	Nebal Lohar	3040159	720690	84	0.28	120	
366	Mahendra Paswan	3040160	720706	84	0.21	110	
367	Mewa Pasi	3040180	720703	83	0.25	160	
368	Santosh Bishwokarma	3040151	720650	84	0.25	110	
369	Bahadur Pasi	3040142	720656	85	0.26	125	
370	Samsi Pasi	3040144	720645	84	0.22	160	
371	Kalika Pandey	3040116	720720	84	0.26	160	
372	Nijamudin Musalman	3040153	721804	87	0.33	195	
373	Nijamudin Musalman	3040172	721810	86	0.26	185	
374	Binse Mauriya	3040154	721798	86	0.38	80	
375	Harish Chandra Khari	3040142	721791	86	0.29	200	
376	Ram Milan Bari	3040123	721794	86	0.26	200	
377	Indrajit Bari	3040126	721791	86	0.28	200	
378	Kanhir Harijan	3040124	721794	86	0.23	200	Manauri
379	Indra Chamar	3040116	721792	86	0.33	195	Tole
380	Tolan Harijan	3040104	721780	86	0.33	80	
381	Parsuram Harijan	3040124	721754	85	0.31	195	
382	Tulsi Ram	3040121	721805	86	0.7	80	
383	Rituraj Barhi	3040120	721820	87	0.58	80	
384	Rituraj Barhi	3040134	721827	87	0.18	190	
385	Triloki Barahi	3040125	721828	87	0.2	90	
386	Durga Prasad Barahi	3040104	721834	87	0.2	95	
387	Chandra Sekhar Barahi	3040116	721842	87	0.18	220	
388	Tripurari Barahi	3040120	721845	87	0.25	200	
389	Arjun Maharjan	3040115	721850	86	0.38	150	
390	Ashok Barahi	3040118	721858	86	0.33	190	
391	Anwor Ali	3040126	721866	86	0.36	80	
392	Abdul Kalam	3040122	721868	86	0.22	95	
393	Ramu Harijan	3040099	721861	86	0.38	80	
394	Shadmali Harijan	3040088	721850	86	0.41	150	
395	Pramod Kumar Harijan	3040082	721846	86	0.18	135	
396	Hira Harijan	3040068	721847	85	0.3	130	
397	America Harijan	3040062	721853	86	0.43	150	

Tube Well Depth with Co-ordinates at Ward No 4							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
398	Nawash Harijan	3040068	721858	85	0.18	150	
399	Bikram Harijan	3040061	721862	85	0.17	150	
400	Jesham Harijan	3040086	721885	86	0.41	150	

Tube Well Depth with Co-ordinates at Ward No 5							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
198	Jaindulla Musalman	3042677	721622	84	0.23	195	
199	Juman Darji	3042667	721636	80	0.22	200	
200	Najabu Sin Sekh	3042652	721629	81	0.21	125	
201	Mustafa Musalman	3042643	721631	81	0.13	195	
202	Intaj Manihar	3042620	721614	81	0.22	195	
203	Abdul Kaium	3042598	721598	81	0.18	180	
204	Saniullah Khan	3042585	721595	81	0.19	180	
205	Najabudin Musalman	3042568	721598	81	0.22	180	
206	Mahibudin Sekh	3042567	721608	81	0.24	130	
207	Khursed Ahamad	3042556	721631	81	0.28	130	
208	Mohamad Rja	3042557	721644	81	0.21	120	
209	Hajrat Ali	3042558	721652	81	0.35	60	
210	Badharu Jma	3042554	721683	81	0.41	70	
211	Sarfudin Musalman	3042551	721615	82	0.21	120	
212	Aahamdin Musalman	3042548	721605	82	0.18	180	
213	Yasudin Musalman	3042547	721606	83	0.23	122	
214	Mohamad Ahamad Sekh	3042548	721600	82	0.34	120	
215	Samsudin Musalman	3042539	721581	81	0.23	180	
216	Abdul Kalam	3042527	721579	82	0.29	110	
217	Abdul Moedh	3042533	721594	82	0.1	120	
218	Enamulla Musalman	3042542	721580	81	0.25	180	
219	Sakila Ahamad	3042555	721576	81	0.24	180	
220	Abdul Mohid	3042565	721572	81	0.31	195	
221	Abdulla Lakim	3042584	721603	81	0.36	200	
222	Raut Musalman	3042580	721607	81	0.16	190	
223	Amir Musalman	3042581	721617	81	0.21	140	
224	Abdullah Darji	3042585	721621	81	0.31	140	
225	Abdul Rahim	3042598	721664	81	0.31	130	
226	Abdullah Musalman	3042580	721660	80	0.33	130	
227	Majibul Rehaman	3042599	721633	80	0.3	125	
228	Abdul Ajij	3042599	721643	81	0.31	120	
229	Jainudin Musalman	3042602	721654	81	0.21	105	
230	Jamanudin Musalman	3042606	721662	81	0.22	145	Mohamad
231	Abdul Kalam	3042565	721623	82	0.33	130	Nagar
232	Abdul Gafir	3042526	721634	82	0.26	140	
233	Masalhaudin Musalman	3042526	721613	83	0.17	130	
234	Salhaudin Musalman	3042513	721606	82	0.28	180	
235	Kitabullah Musalman	3042519	721621	81	0.23	120	
236	Ashiulalaah Musalman	3042514	721623	81	0.25	120	
237	Abdul Samad Musalman	3042487	721616	83	0.21	80	
238	Samsul Hak	3042494	721635	82	0.25	85	
239	Abdul Sakur	3042497	721642	82	0.46	60	
240	Tasawar Musalman	3042486	721610	82	0.23	120	
241	Maslal Ali	3042484	721598	82	0.36	60	
242	Mnnan Musalman	3042474	721600	82	0.43	80	
243	Majid Husen	3042460	721599	82	0.41	120	
244	Hsanulalaah Musalman	3042437	732592	83	0.26	120	
245	Abdul Galil	3042406	721555	82	0.25	80	
246	Abdul Sabudh	3042411	721541	82	0.31	195	

Tube Well Depth with Co-ordinates at Ward No 5							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
247	Rafik Ahamad	3042371	721579	83	0.41	60	
248	Abdul Rhaman	3042236	721562	83	0.22	100	
249	Abdul Rhaman	3042190	721558	83	0.29	120	
250	Yaku Musalman	3042183	721557	83	0.23	195	
251	Yaku Musalman	3042146	721544	83	0.31	60	
252	Mubarak Musalman	3042121	721566	83	0.21	120	
253	Mohamad Muslim	3042092	721578	83	0.26	120	
254	Ahamdin Musalman	3042096	721555	83	0.35	195	
255	Mohamad Salik	3042079	721571	83	0.21	195	
256	Nisar Ahamad	3042063	721567	82	0.33	180	
257	Abdul Hakim	3042036	721551	82	0.28	170	
258	Abdul Hakim	3042028	721547	82	0.19	150	
259	Altaf Khan	3041853	721467	87	0.31	185	
260	Gerajudin Musalman	3041855	721504	86	0.41	190	
261	Samim Khan	3041843	721461	84	0.29	200	
262	Safiulalah Musalman	3041849	721448	85	0.46	190	
263	Musalkin Musaman	3041829	721456	84	0.21	210	
264	Kasin Musalman	3041836	721446	84	0.33	185	
265	Hfijulalah Musalman	3041832	721437	84	0.31	185	
266	Inamulalah Musalman	3041810	721447	84	0.21	150	
267	Samsad Ahamad	3041822	721438	83	0.23	200	
268	Niyaj Ahamad Darji	3041807	721434	83	0.21	200	
269	Sapir Ahamad Darji	3041813	721436	83	0.38	200	
270	Hastihak Musalman	3041800	721429	83	0.41	95	
271	Firoj Ahamad	3041800	721429	83	0.35	95	
272	Aswok Ahamad	3041793	721440	82	0.26	110	
273	Mehikudin Musalman	3041784	721400	83	0.26	110	
274	Kamrudin Musalman	3041775	721396	83	0.34	195	
275	Msahud Aalam	3041825	721389	81	0.23	85	
276	Abdul Moedh	3041802	721391	81	0.33	110	
277	Naresh Kumar Barma	3041799	721380	80	0.3	110	
278	Abdul Kalam	3041795	721373	80	0.5	100	
279	Arsad Ahamad	3041786	721371	79	0.29	100	
280	Atiulalaah Musalman	3041775	721360	80	0.31	100	
281	Samsul Musalman	3041773	721381	80	0.22	100	Chauthiya
282	Ekbal Ahamad	3041767	721372	80	0.29	200	Tole
283	Ram Bahal Lohar	3041763	721378	80	0.26	75	
284	Manjit Lohar	3041759	721373	80	0.36	195	
285	Buddhilal Lohar	3041765	721366	80	0.26	75	
286	Jafu Nisa	3041747	721364	79	0.28	200	
287	Kamlabati Devi	3041772	721342	79	0.25	150	
288	Harku Kahar	3041759	721332	78	0.36	100	
289	Safiulalaah Musalman	3041738	721333	78	0.35	100	
290	Aliulalaah Musalman	3041728	721332	78	0.28	110	
291	Askaf Ahamad	3041716	721332	79	0.36	120	
292	Mohamad Faruk	3041716	721309	78	0.5	120	
293	Ghuse Musalman	3041703	721289	78	0.26	200	
294	Safik Ahamad	3041699	721289	78	0.21	150	
295	Abu Sae Musalman	3041699	721261	77	0.25	180	

Tube Well Depth with Co-ordinates at Ward No 5							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
296	Haiyaj Ali	3041691	721280	77	0.23	150	
297	Riyaj Ahamad	3041681	721290	77	0.24	135	
298	Jiya Hak	3041674	721285	76	0.33	95	
299	Parwari Gupta	3041676	721307	75	0.33	190	
300	Lal Kisun Kahar	3041665	721309	75	0.43	140	

Tube Well Depth with Co-ordinates at Ward No 6							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
101	Satan Chaee	3042589	723504	78	0.31	160	
102	Nanan Chaee	3042586	723505	79	0.25	85	
103	Mohamad Raphik	3042577	723479	78	0.3	85	
104	Atari Sahani	3042583	723523	79	0.33	85	Tanahu
105	Abdul Ahid	3042568	723515	78	0.33	75	
106	Sabar Tulla	3042528	723538	78	0.2	180	
107	Najam Ohamad	3042546	723601	78	0.21	120	
108	Aare Gupta	3042550	723610	78	0.13	120	
109	Kanchha Gupta	3042582	723622	78	0.21	115	
110	Raju Gupta	3042588	723622	78	0.21	105	
111	Anil Gupta	3042600	723615	78	0.23	115	
112	Janardan Gupta	3042571	723626	78	0.13	105	
113	Chhedi Yadav	3042554	723625	78	0.17	110	
114	Oli Ulla	3042541	723653	78	0.3	110	
115	Mohamad Shabir	3042526	723649	78	0.26	100	
116	Mehari Hushen	3042514	723637	78	0.23	115	
117	Abadul Ahamad	3042514	723642	78	0.21	115	
118	Kamarud Jag	3042500	723636	78	0.15	110	Bichla
119	Amerudin Musalman	3042497	723623	78	0.28	110	Diha
120	Samshudin Musalman	3042500	723630	78	0.1	110	
121	Mukim	3042494	723646	78	0.23	120	
122	Abadul Ajij	3042487	723660	78	0.2	165	
123	Iku Rahman	3042467	723654	78	0.087	75	
124	Munibulla	3042449	723650	78	0.21	160	
125	Jallaudin	3042598	723623	78	0.28	75	
126	Phul Chandra Gupta	3042454	723612	79	0.26	80	
127	Binod Gupta	3042459	723595	79	0.21	80	
128	Sura kahal	3042477	723605	79	0.25	85	
129	Sailan Kahal	3042479	723603	79	0.37	110	
130	Ajim Musalman	3042479	723597	78	0.37	80	
131	Jambha Musalman	3042474	723583	79	0.24	80	
132	Chamerulla Musalman	3042442	723578	80	0.2	80	
133	Ajiju Rahman	3042482	723580	80	0.23	80	
134	Bachu Lal Gupta	3042501	723570	80	0.24	85	
135	Bishnu Prashad Bari	3042490	723561	81	0.18	100	
136	Harish Chandra Bari	3042482	723555	82	0.23	80	
137	Lal Bahadur Bari	3042472	723557	82	0.36	85	
138	Sarju Prashad Bari	3042473	723561	82	0.25	85	
139	Mukbul	3042465	723556	82	0.2	85	
140	Harulla Dhobi	3042462	723564	82	0.31	80	
141	Bechan Yadav	3042447	723553	83	0.31	80	
142	Abadul Hakim	3042452	723523	83	0.43	80	
143	Abadul Rahman	3042444	723527	84	0.23	80	
144	Jayaulla Rahaman	3042436	723582	85	0.38	80	
145	Samshatamarej	3042422	723514	84	0.29	75	
146	Ramchandra Shreewastav	3042415	723521	84	0.21	85	
147	Birjesh Kumar Shreewastav	3042422	723514	85	0.5	80	
148	Phate Mohamad	3042418	723503	85	0.38	80	
149	Rakesh shreewastav	3042433	723497	86	0.4	80	
150	Bijay Shreewastav	3042411	723484	85	0.41	86	
151	Abadul Rahim	3042434	723484	85	0.2	80	

Tube Well Depth with Co-ordinates at Ward No 6							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
152	Hari Shankar Raut	3042412	723460	84	0.14	90	
153	Ghanshyam Harijan	3042400	723450	84	0.58	85	
154	Ranjit Yadav	3042287	723429	83	0.53	80	
155	Anirka Yadav	3042263	723432	83	0.43	110	
156	Ramsebak Yadav	3042270	723468	84	0.33	110	
157	Hariram Yadav	3042287	723456	83	0.4	73	
158	Abadul Rahaman	3042426	723437	83	0.38	70	
159	Harichandra Harijan	3042442	723436	84	0.25	70	
160	Ganga Ram Harijan	3042453	723441	83	0.35	75	Gaiya
161	Ram Bikash Harijan	3042459	723442	83	0.43	85	Tole
162	Suruj Lal Harijan	3042461	723447	83	0.43	95	
163	Upi Mohamad	3042456	723462	82	0.41	95	
164	Abubkar Mohamad	3042455	723477	83	0.46	95	
165	Brijlal Chamar	3042486	723448	77	0.3	80	
166	Abadula	3042473	723457	85	0.43	100	
167	Ramjan	3042464	723488	86	0.22	85	
168	Nawashe Abadul	3042606	723526	85	0.38	80	
169	Lal Man Dhari	3042593	723539	85	0.46	80	
170	Ram Bikash Lohar	3042595	723554	85	0.33	260	
171	Government Tube Well	3042585	723551	85	0.2	85	
172	Rajesh Lohar	3042592	723577	85	0.3	110	
173	Aalam Musalman	3042595	723592	85	0.36	110	
174	Halim Musalman	3042590	723600	84	0.31	100	
175	Abadul Musalman	3042596	723602	85	0.38	100	
176	Bakar Nau Musalman	3042579	723535	85	0.24	90	
177	Sabudin Musalman	3042567	723574	86	0.46	100	
178	Ram Brish Lohar	3042608	723558	85	0.25	110	
179	Ram Chandra Lohar	3042617	723553	85	0.14	110	
180	Ram Shankar Lohar	3042614	723564	84	0.46	160	
181	Ram Narayan Lohar	3042617	723570	85	0.25	110	
182	Jamaludin Musalman	3042627	723577	85	0.2	110	
183	Buchu Dhari	3042640	723572	85	0.13	110	
184	Ram Prashad Dhari	3042632	723561	86	0.25	162	
185	Ram Ajodhya Dhari	3042634	723553	86	0.15	160	
186	Pradip Dhari	3042633	723540	86	0.07	120	
187	Pansam Dhari	3042629	723532	87	0.09	80	
188	Ramlal Ahir	3042613	723553	86	0.11	110	
189	Hari Chandra Yadav	3042619	723518	86	0.31	120	
190	Nashrudin Musalman	3042641	723521	85	0.24	160	
191	Sararudin Musalman	3042649	723526	86	0.21	160	
192	Jagan Dhari	3042652	723542	85	0.23	160	
193	Chingut Dhari	3042658	723551	85	0.14	160	
194	Ram Bilash Yadav	3042656	723556	86	0.17	160	
195	Sureman Yadav	3042676	723553	85	0.26	160	
196	Ati Ulla Khan	3042639	723508	86	0.24	120	
197	Om Prakash Yadav	3042677	723511	86	0.14	180	

Tube Well Depth with Co-ordinates at Ward No 7							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
802	Dhirendra Nau	3046643	725359	93	0.43	35	
803	Birendra Nau	3046652	725358	91	0.23	35	
804	Sajendra Nau	3046655	725347	90	0.58	30	
805	Salim Musalman	3046660	725324	89	0.58	30	
806	Salim Musalman	3046667	725322	89	0.25	120	
807	Hajrat Ali	3046668	725302	88	0.87	30	
808	Hajrat Ali	3046663	725308	88	0.53	35	
809	Guddu Ali	3046664	725297	88	0.33	125	
810	Ramu Yadav	3046681	725286	88	0.33	80	
811	Dinesh Yadav	3046670	725280	87	0.34	80	
812	Nagu yadav	3046664	725274	87	0.35	100	
813	Kedar Yadav	3046689	725262	87	0.26	120	
814	Radhe Shyam Gupta	3046689	725314	85	0.63	35	
815	Dhorhe Teli	3046699	725300	85	0.15	190	
816	Mohamad Eesu	3046656	725279	84	0.36	95	
817	Hajrat Ali	3046655	725256	84	0.2	85	
818	Abdul Rahaman	3046671	725249	85	0.18	195	
819	Najabudin Musalman	3046675	725228	84	0.18	85	
820	Mohamad Kuwed	3046675	725220	84	0.22	85	
821	Abdul Rahaman	3046678	725215	84	0.087	195	
822	Banarasi Sonar	3046691	725249	83	0.3	60	
823	Baburam Gupta	3046707	725252	83	0.29	90	
824	Mohamad Ajmal	3046720	725266	83	0.46	80	
825	Rakesh Gupta	3046732	725256	82	0.16	170	
826	Bhola Sonar	3046731	725269	82	0.46	80	
827	Samal Gupta	3046751	725282	82	0.38	60	
828	Baburam Gupta	3046743	725249	82	0.28	70	
829	Hahar Teli	3046750	725242	82	0.14	210	
830	Chandar Khan Teli	3046758	725252	82	0.23	180	
831	Rudra Gupta	3046739	725237	83	0.09	180	
832	Chinak Gupta	3046792	725226	87	0.05	170	
833	Lirikram Kahar	3046748	725200	85	0.1	162	
834	Wasiulallah Musalman	3046744	725207	85	0.11	165	
835	Baksuulallah Musalman	3046748	725208	85	0.15	165	
836	Parsuram Gupta	3046734	725190	84	0.38	100	
837	Akbal Musalman	3046734	724634	84	0.35	120	
838	Aamin Phakir	3046723	725202	84	0.07	200	
839	Ramdev Gupta	3046725	725194	84	0.077	200	
840	Ramjan Ali Fakir	3046698	725226	84	0.28	210	Bhaisehiya
841	Mohamad Mustakil	3046692	725233	84	0.29	60	
842	Kalamudin Musalman	3046699	725227	84	0.5	65	
843	Shaneshwor Gupta	3046695	725188	85	0.63	35	
844	Shree Pujan Teli	3046694	725169	84	0.41	55	
845	Santosh Gupta	3046691	725167	84	0.46	62	
846	Shree Pujan Gupta	3046687	725169	84	0.5	65	
847	C K Gupta	3046704	725147	84	0.31	60	
848	Kedar Teli	3046705	725163	85	0.5	90	
849	Kedar Teli	3046683	725184	84	0.43	65	
850	Anil Yadav	3046669	725180	84	0.3	105	
851	Naresh Yadav	3046655	725168	84	0.12	200	
852	Bidabati Yadav	3046658	725158	85	0.14	195	
853	Mahendra Nau	3046661	725153	85	0.15	200	
854	Feku Yadav	3046649	725148	85	0.033	200	

Tube Well Depth with Co-ordinates at Ward No 7							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
855	Bhindeshwori Sukla	3046627	725133	85	0.46	60	
856	Bhindeshwori Sukla	3046673	725142	85	0.36	80	
857	Bahabu Prasad Yadav	3046651	725130	85	0.2	55	
858	Om Prakash Yadav	304662	725128	85	0.58	60	
859	Dhurba Prasad Yadav	3046672	725122	84	0.58	60	
860	Indrajit Yadav	3046657	725115	85	0.53	60	
861	Shib Shankar Yadav	304633	725110	85	0.5	60	
862	Aasis Mishra	3046624	725104	85	0.13	330	
863	Bhulchan Mishra	3046607	725113	85	0.43	330	
864	Bihari Yadav	3046617	725063	84	0.87	40	
865	Lagannath Yadav	3046619	725050	84	0.58	390	
866	Mohamad Wfa	3046638	725174	85	0.33	80	
867	Kumar Bhadur Yadav	3046631	725187	85	0.13	195	
868	Rakesh Yadav	3046622	725183	85	0.5	330	
869	Ram Newash Yadav	3046610	725178	86	0.5	45	
870	Santosh Gupta	3046603	725178	86	0.63	60	
871	Raj Kumar Chamar	3046593	725172	86	0.63	60	
872	Pujari Dhabal	3046601	725149	86	0.36	80	
873	Shiv Pujan Harijan	3046580	725144	86	0.15	64	
874	Rajman Harijan	3046546	725160	86	0.36	95	
875	Lal Man Harijan	3046545	725136	86	0.24	100	
876	Sugyaman Yadav	3046659	725202	88	0.19	190	
877	Bablu Yadav	3046656	725209	88	0.33	120	
878	Chinku Yadav	3046647	725203	86	0.26	75	
879	Sesman Yadav	3046634	725206	86	0.36	60	
880	Kripanath Yadav	3047077	725256	87	0.17	160	
881	Kripanath Yadav	3047073	725254	87	0.38	160	
882	Srijan Pasi	3047073	725266	87	0.23	160	
883	Hareram Lohar	3047093	725241	87	0.24	160	
884	Pradip Kurmi	3047098	725277	87	0.5	205	
885	Buddha Narayan Lohar	3047094	725289	88	0.08	170	
886	Bhulayee Kurmi	3047107	725293	88	0.01	180	
887	Ram Shubhag Yadav	3047100	725303	88	0.16	160	
888	Bahadur Kurmi	3047104	725332	88	0.63	60	
889	Lal Bahadur Bishwokarma	3047117	725305	88	0.09	160	
890	Oje Bishwokarma	3047122	725300	88	0.07	180	Bichauwa
891	Prabhunath Yadav	3047131	725299	88	0.1	160	pur
892	Ram Newash Yadav	3047137	725295	88	0.12	160	
893	Banarshi Prasad Bishwokarma	3047132	725314	88	0.16	160	
894	Om Prakash Yadav	3047146	725266	89	0.46	135	
895	Raj Kumar Yadav	3047144	725257	89	0.3	136	
896	Ramdev Yadav	3047175	725315	88	0.23	160	
897	Dharam Raj Yadav	3047172	725304	89	0.29	170	
898	Ram Kisun Sah	3047171	725307	88	0.22	50	
899	Ram Dular Gupta	3047187	725306	88	0.24	55	
900	Ram Dev Yadav	3047195	725285	88	0.4	35	

Tube Well Depth with Co-ordinates at Ward No 8							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
1101	Sadahudin Musalman	3044673	726090	88	0.24	150	
1102	Badri Mali	3044666	726090	88	0.24	190	
1103	Ram Badan Mali	3044659	726096	88	0.43	170	
1104	Sadai Mali	3044653	726096	88	0.2	100	
1105	Hissu Mali	3044667	726106	88	0.35	80	
1106	Mohamad Raja	3044715	726100	87	0.35	80	
1107	Mohamad Saud	3044716	726134	87	0.45	80	
1108	Mohamad Saud	3044726	726138	86	0.46	80	
1109	Gopal Mali	3044753	726103	85	0.3	80	
1110	Gopal Mali	3044742	726101	85	0.5	60	
1111	Shahida Khatun	3044767	726110	85	0.46	85	
1112	Kishun Yadav	3044786	726127	85	0.63	60	
1113	Chait Ram Gupta	3044782	726152	85	0.21	120	
1114	Rudal Gupta	3044786	726196	85	0.3	85	
1115	Buddhiram Gupta	3044769	726240	85	0.4	100	
1116	Paras Mali	3044765	726241	85	0.41	100	
1117	Lautan Mali	3044755	726264	86	0.53	65	
1118	Milan Gupta	3044795	726254	89	0.31	80	
1119	Soharat Bishwokarma	3044785	726270	90	0.19	150	
1120	Ram Milan Gupta	3044778	726283	90	0.25	115	
1121	Rudal Gupta	3044776	726285	90	0.2	215	
1122	Rajaram Gupta	3044755	726286	90	0.08	240	
1123	Bikram Harijan	3044754	726295	90	0.23	135	
1124	Santaram Harijan	3044744	726289	89	0.31	80	
1125	Manoj Harijan	3044739	726291	89	0.24	125	
1126	Shiwar Bhuj	3044722	726283	89	0.26	125	
1127	Prameshwor Bhuj	3044721	726285	88	0.21	120	
1128	Supujan Jaysawal	3044712	726281	89	0.23	230	
1129	Nandram Ram	3044711	726298	89	0.16	200	
1130	Ram Milan Harijan	3044709	726304	90	0.25	95	
1131	Shyam Milan Harijan	3044703	726313	90	0.31	95	
1132	Balram Harijan	3044703	726323	91	0.33	95	
1133	Sudhram Harijan	3044702	726327	91	0.21	90	
1134	Buddhiram Harijan	3044698	726336	91	0.21	205	
1135	Ram Bahal	3044686	726335	91	0.11	80	
1136	Tribhuwan Harijan	3044682	726347	91	0.14	150	
1137	Chande Harijan	3044667	726339	91	0.21	120	
1138	Sunita Gupta	3044656	726343	90	0.7	85	
1139	Suresh Harijan	3044683	726328	91	0.8	90	
1140	Dharmendra Harijan	3044676	726320	91	0.43	90	
1141	Jamnati Harijan	3044678	726314	91	0.23	95	
1142	Bhulki Harijan	3044671	726312	91	0.3	95	
1143	Ram Brish Harijan	3044670	726317	91	0.12	120	
1144	Ram Lal Harijan	3044663	726311	91	0.33	90	
1145	Lal Bahadur Harijan	3044684	726315	91	0.25	295	
1146	Urmila Harijan	3044668	726303	91	0.46	90	
1147	Ram Milan Harijan	3044683	726302	90	0.29	85	
1148	Ram Milan Harijan	3044682	726295	90	0.31	85	Thulo

Tube Well Depth with Co-ordinates at Ward No 8							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
1149	Nagmati Khatun	3044701	726340	90	0.23	95	Yekla
1150	Sayraj Musalman	3044703	726345	89	0.21	180	Tole
1151	Shehanaj Khan	3044716	726360	89	0.15	130	
1152	Jahir Khan	3044721	726374	87	0.18	180	
1153	Jainulaudin Musalman	3044713	726388	87	0.5	180	
1154	Abdul Wahid	3044719	726402	88	0.18	230	
1155	Bharat Prasad Chy	3044696	726408	87	0.23	192	
1156	Ganesh Chy	3044673	726422	86	0.22	230	
1157	Intiyaj Ahamad	3044743	726416	87	0.1	120	
1158	Bashir Ahamad	3044755	726432	86	0.25	150	
1159	Somnath Baniya	3044769	726401	86	0.3	60	
1160	Abdul Hakim	3044769	726404	85	0.17	100	
1161	Abdul Salam	3044768	726419	85	0.22	140	
1162	Abdul Rahim	3044763	726426	84	0.2	240	
1163	Mohamad Naeen	3044762	726428	83	0.43	80	
1164	Ram Lal Kahar	3044792	726426	84	0.17	190	
1165	Insan Ali	3044794	726411	84	0.25	150	
1166	Rafik Ahamad Khan	3044819	726403	84	0.23	150	
1167	Ajay Baniya	3044836	726408	83	0.17	225	
1168	Ram Kishor Baniya	3044843	726410	83	0.38	85	
1169	Shiv Narayan Yadav	3044845	726417	82	0.08	200	
1170	Bal Kishun Baniya	3044851	726419	82	0.23	170	
1171	Abdul Hak	3044861	726422	82	0.2	205	
1172	Abdul Hak	3044866	727409	82	0.46	100	
1173	Nurjaha Khatun	3044870	726407	82	0.27	280	
1174	Om Prakash Baniya	3044856	726453	82	0.11	180	
1175	Kishor Kahar	3044852	726457	82	0.38	200	
1176	Raula Musalman	3044847	726460	81	0.5	80	
1177	Salim Khan	3044838	726455	81	0.21	175	
1178	Abdul Ohid	3044832	726464	80	0.53	80	
1179	Safik Mohamad	3044884	726435	79	0.26	185	
1180	Safik Ulalaah	3044890	726436	79	0.31	175	
1181	Haki Ulalaah	3044891	726437	78	0.29	150	
1182	Mohamad Aayub	3044893	726437	78	0.15	240	
1183	Mustakim Musalman	3044924	726443	78	0.29	120	
1184	Rafik Ahamad	3044808	726385	78	0.22	210	
1185	Kalim Ulalaah	30448036	726388	89	0.21	90	
1186	Mehaboob Ahamad	3044855	726397	89	0.28	75	
1187	Kalamudin Musalman	3044859	726401	89	0.25	80	
1188	Mohamad Yaku	3044845	726392	89	0.31	90	
1189	Gokhan Prasad Teli	3044804	726374	88	0.2	240	
1190	Krish Mohan Gupta	3044791	726357	88	0.18	240	
1191	Krish Mohan Gupta	3044797	726361	88	0.87	35	
1192	Prawej Musalman	3044772	726350	88	0.24	195	
1193	Ram Chandra Kalwar	3044762	726334	88	0.35	100	
1194	Lal Mohan Lodh	3044766	726334	87	0.12	135	
1195	Lal Mohan Lodh	3044747	726334	87	0.28	110	
1196	Chait Ram Gupta	3044764	726321	86	0.2	200	

Tube Well Depth with Co-ordinates at Ward No 8							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
1197	Ram Milan Jaiswal	3044767	726321	85	0.21	80	
1198	Jugesh Gupta	3044766	726312	85	0.38	240	
1199	Rajman Gupta	3044766	726303	85	0.25	110	
1200	Shree Kisun Kalwar	3044799	726250	90	0.35	140	

Tube Well Depth with Co-ordinates at Ward No 9

GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
701	Rajendra Kurmi	3044310	728200	57	0.25	205	
702	Lal Saheb Kurmi	3044303	728198	58	0.35	195	
703	Rajendra Kurmi	3044307	728189	58	0.33	115	
704	Om Prakash Kurmi	3044284	728214	59	0.36	120	
705	Pawan Kalyan Kurmi	3044308	728220	60	0.17	120	
706	Rudra Kumar Kurmi	3044322	728217	61	0.3	210	
707	Shiv Temple	3044295	728239	61	0.36	115	
708	Rudra Nath Chy	3044299	728263	62	0.35	115	
709	Kishir Kumar Yadav	3044322	728234	63	0.15	110	
710	Babbu Nai	3044319	728236	64	0.26	80	
711	Ram Newash Dhabal	3044328	728233	65	0.41	195	
712	Sugdev Tiwari	3044338	728239	66	0.28	215	
713	Ram Dev Tiwari	3044355	728242	67	0.38	210	
714	Devi Prasad Kurmi	3044353	728225	67	0.23	210	
715	Supal Kurmi	3044358	728217	68	0.36	30	
716	Sunwarsa Tole (Public)	3044366	728225	68	0.33	210	
717	Ram Milan Kurmi	3044370	728227	69	0.18	45	Sunbarsha
718	Radhe Ram Dhabal	3044374	728216	69	0.43	210	
719	Karma Bahadur Bishwokarma	3044373	728214	69	0.63	35	
720	Pramod Dhabal	3044379	728176	69	0.28	200	
721	Kamla Bati Dhabal	3044396	728170	68	0.19	115	
722	Hare Ram Dhabal	3044389	728192	70	0.38	100	
723	Shup Lal Kurmi	3044404	728206	70	0.29	180	
724	Kodaya Yadav	3044426	728192	70	0.58	215	
725	Ganesh Yadav	3044421	728197	71	0.3	215	
726	Mathura Yadav	3044429	728203	72	0.45	70	
727	Mathura Murau	3044420	728218	72	0.46	70	
728	Banarasi Murau	3044433	728222	73	0.26	200	
729	Ramchal Kurmi	3044409	728219	73	0.35	210	
730	Gawahit Kurmi	3044388	728225	74	0.14	35	
731	Ghanshyam Murari	3044403	728241	75	0.41	210	
732	Pradip Tiwari	3044381	728277	81	0.25	75	
733	Narad Tiwari	3044387	728286	82	0.31	235	
734	Aangat Tiwari	3044391	728289	81	0.28	240	
735	Indrajit Tiwari	3044377	728289	80	0.29	20	
736	Baitulla Musalman	3044371	728299	80	0.43	60	
737	Santi Harijan	3044763	728312	80	0.3	240	
738	Koela Tiwari	3044383	728269	81	0.33	40	
739	Ashok Kahar	3044386	728253	81	0.22	215	
740	Pawan Kumar Tripathi	3044407	728255	81	0.21	235	
741	Jogi Murau	3044432	728237	82	0.46	150	
742	Hari Prasad Kahar	3044448	728245	82	0.58	50	
743	Anil Tiwari	3044462	738240	81	0.33	35	
744	Mahendra Dhobi	3044460	728235	81	0.38	206	
745	Anil Tiwari	3044469	728246	81	0.43	35	
746	Mitbu Nisha	3044471	728246	81	0.5	35	
747	Palat Kewat	3044475	728250	81	0.35	40	
748	Hemanchal Kewat	3044475	728264	82	0.25	280	
749	Mukut Nau	3044474	728271	82	0.46	300	
750	Shree Ram Malla	3044482	728269	82	0.46	35	
751	Ram Nayan Kurmi	3944487	728261	82	0.29	40	
752	Najabudin Musalman	3044498	728277	82	0.53	60	

Tube Well Depth with Co-ordinates at Ward No 9

GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
753	Kamrudin Musalman	3044521	728285	82	0.58	60	
754	Kalamudin Musalman	3044518	728291	82	0.38	55	
755	Driver Chy	3044522	728310	82	0.3	60	
756	Driver Chy	3044522	728313	82	0.43	30	
757	Kamrudin Musalman	3044476	728250	84	0.5	283	
758	Tek Bahadur Tharu	3044463	728305	84	0.18	270	
759	Mehabub Aalam	3044472	728301	84	0.28	370	
760	Gangaram Gupta	3044479	728306	85	0.15	221	
761	Abdulla Musalman	3044480	728311	85	0.58	220	
762	Mansaf Ali	3044509	728319	85	0.46	230	
763	Aslam Musalman	3044492	728338	84	0.5	65	
764	Atram Husen	3044484	728339	85	0.24	150	
765	Safirullah Musalman	3044494	728346	85	0.77	67	
766	Masud Aalam	3044485	728355	85	0.21	35	
767	Abu Husen	3044497	728347	85	0.5	185	
768	Kanhaiya Yadav	3044501	728354	85	0.63	60	Bichauwa
769	Brahamanand Yadav	3044509	728361	85	0.53	180	Pur
770	Ram Bilash Yadav	3044525	728363	85	0.7	180	
771	Bishnu Prasad Yadav	3044509	738381	85	0.5	60	
772	Ganga Ram Teli	3044543	728435	85	0.63	30	
773	Ram Baran Nau	3044535	728455	86	0.17	40	
774	Ram Baran Nau	3044529	728454	86	0.35	170	
775	Jagdish Tiwari	3044550	728467	86	0.5	180	
776	Jagdish Tiwari	3044553	728472	86	0.7	25	
777	Jagram Chy	3044560	728467	86	0.35	35	
778	Gita Chy	3044562	728475	87	0.5	35	
779	Radheshyam Yadav	3044539	738488	87	0.43	150	
780	Ram Abtar Yadav	3044558	728491	87	0.7	35	
781	America Malaah	3044559	738507	87	0.38	190	
782	Sunur Malaah	3044560	738515	87	0.77	40	
783	Ram Sagar Malaah	3044540	738511	88	0.21	160	
784	Sunur Malaah	3044528	728505	87	0.46	30	
785	Mahendra Ahir	3044525	728499	87	0.87	35	
786	Sukhram Malaah	3044559	728535	89	0.58	25	
787	Upa Malaah	3044558	728541	88	0.3	180	
788	Lalchan Malaah	3044563	728557	88	0.5	200	
789	Kailash Malaah	3044545	728574	87	0.41	25	
790	Bichauwapur (Public)	3044564	728575	88	0.38	180	
791	Lalman Malaah	3044572	728581	88	0.63	35	
792	Rajendra Malaah	3044565	728594	88	0.58	180	
793	Shyam Lal Malaah	3044554	728602	88	0.56	75	
794	Jhinkar Malaah	3044555	728614	87	0.63	30	
795	Chinilal Malaah	3044550	728604	87	0.41	180	
796	Sukhraj Malaah	3044542	728587	87	0.46	180	
797	Kamalnath Malaah	3044574	738599	87	0.36	28	
798	Bechan Malaah	3044575	728601	87	0.36	225	
799	Pyare Kewat	3044579	728617	87	0.33	180	
800	America Yadav	3044587	728612	87	0.53	230	

Tube Well Depth with Co-ordinates at Ward No 10							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
601	Ganesh Prasad Kurmi	3041782	727387	84	0.43	150	
602	Radhe Shyam Yadav	3041800	727359	77	0.38	170	
603	Janardan Yadav	3041833	727371	78	0.38	165	
604	Prakash Harijan	3041800	727335	79	0.3	75	
605	Ram Naresh Yadav	3041804	727317	80	0.31	170	
606	Ram Prakash Yadav	3041799	727309	81	0.31	170	
607	Binod Harijan	3041792	727309	81	0.33	175	
608	Dipak Harijan	3041794	727303	81	0.38	165	
609	Raj Kumar Harijan	3041787	727282	83	0.17	150	
610	Ram Milan Harijan	3041781	727280	83	0.23	170	
611	Gulab Prasad Harijan	3041785	727254	84	0.09	160	
612	Mukesh Kahar	3041776	727243	85	0.14	160	
613	Madhubani Tole(Public)	3041778	727234	85	0.33	170	
614	Nagendra Prasad Yadav	3041800	727234	86	0.33	160	
615	Yogendra Yadav	3041804	727247	87	0.2	160	
616	Ram Lalit Yadav	3041850	727236	87	0.41	100	
617	Tulsi Ram Dhabal	3041825	727212	88	0.23	170	Madhubani
618	Ram Sewak Dhabal	3041810	727215	89	0.7	35	
619	Bihari Kurmi	3041807	727222	89	0.24	170	
620	Umesh Kurmi	3041806	727187	89	0.25	170	
621	Saranjit Yadav	3041804	727205	90	0.58	30	
622	Pradip Dhabal	3041784	727200	91	0.22	180	
623	Bhagawan Prasad Kurmi	3041779	727212	91	0.35	145	
624	Triweni Dhobi	3041772	727197	91	0.058	180	
625	Ram Lalit Dhobi	3041751	727192	91	0.21	160	
626	Chill Sagar Baniya	3041737	727204	91	0.41	150	
627	Ram Lakan Baniya	3041741	727209	91	0.08	120	
628	Birendra Kurmi	3041743	727218	91	0.06	185	
629	Chandra Mohan Kahar	3041718	727218	91	0.1	180	
630	Chhedi Harijan	3041710	727182	91	0.21	180	
631	Ram Dev Harijan	3041705	727175	90	0.31	180	
632	Bhadai Harijan	3041699	727188	90	0.14	160	
633	Harijan Palti	3041691	727159	89	0.35	180	
634	Dukhal Dhabal	3041689	727198	90	0.25	100	
635	Bijay Bahadur Dhabal	3041697	727215	91	0.33	50	
636	Munsi Nau	3041687	727219	91	0.31	60	
637	Suresh Kurmi	3041700	727249	91	0.15	200	
638	Madhubani Tole(Public)	3041728	727257	91	0.16	150	
639	Ghanshyam Kurmi	3041121	727820	83	0.53	40	
640	Umesh Lodh	3041106	727821	83	0.58	40	
641	Birendra Kurmi	3041114	727815	83	0.53	40	
642	Mishri Lodh	3041112	727835	83	0.5	35	
643	Ladu Ram Lohar	3041098	727820	83	0.63	150	
644	Rameshwor Lohar	3041106	727813	83	0.63	50	
645	Babegaju Lodh	3041092	727803	83	0.36	45	Tripathi
646	Surujman Yadav	3041070	727779	83	0.17	110	Tole
647	Mohan Lodh	3041047	727772	83	0.38	120	
648	Nandlal Lodh	3041042	727796	83	0.58	40	
649	Bharat Lodh	3041037	727768	84	0.58	40	
650	America Lodh	3041026	727780	84	0.7	50	

Tube Well Depth with Co-ordinates at Ward No 10							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
651	Santosh Kurmi	3041046	727750	83	0.24	120	
652	Budhnipur	3041015	727754	84	0.2	200	
653	Punwasi Barahi	3040993	727756	84	0.41	30	
654	Punwasi Barhi	3040988	727757	85	0.43	30	
655	Bal Kisun Barhi	3040996	727759	84	0.46	30	
656	Sudama Lodh	3041009	727775	84	0.43	30	
657	Prem Kumar Barhi	3040992	727777	84	0.7	30	
658	Bhagwat Barhi	3040995	727783	84	0.41	120	
659	Newash Lodh	3040990	727786	83	0.28	100	
660	Radhe Shyam Lodh	3040989	727789	83	0.53	85	
661	Radhe Shyam Lodh	3040965	727796	83	0.58	35	
662	Newash Lodh	3040965	727802	83	0.58	35	
663	Newash Lodh	3040962	727804	83	0.5	30	
664	Jit Kurmi	3040948	727778	83	0.87	30	
665	Adhram Lodh	3040949	727775	83	0.87	30	
666	Maulesh Tripathi	3040943	727757	84	0.25	195	
667	Chobhapati Barahi	3040957	727754	83	0.53	40	
668	Nagendra Baniya	3040955	727744	83	0.46	110	
669	Satyadev Pathak	3040942	727726	83	0.36	195	
670	America Kurmi	3040942	727714	83	0.43	35	
671	Chinak Kurmi	3040926	727695	82	0.31	200	
672	Surendra Thakur	3040911	727687	83	0.46	225	
673	Ramdash Thakur	3040911	727672	83	0.43	25	
674	Kailash Baniya	3040907	722666	83	0.43	40	
675	Shree Lodh	3040906	727663	82	0.41	25	Mahilbari
676	Ram Chandra Baniya	3040903	727675	83	0.53	35	Tole
677	Aklik Pasi	3040910	7227648	82	0.5	30	
678	Jagnarayan Lodh	3040909	727637	82	0.41	35	
679	Punwashi Baniya	3040918	727626	81	0.5	30	
680	Mahesh Prasad Chamar	3040926	727637	82	0.36	30	
681	Shyam Sundar Nau	3040938	727640	81	0.29	195	
682	Tiru Kurmi	3040929	727652	81	0.53	40	
683	Chinak Kurmi	3040933	727654	80	0.53	40	
684	Chintu Kurmi	3040927	727668	81	0.53	35	
685	Tekai Kurmi	3040934	727667	81	0.5	35	
686	Motalu Kurmi	3040926	727675	81	0.53	30	
687	Ram Dash Kurmi	3040924	727680	82	0.33	220	
688	Krishna Lodh	3040954	727717	82	0.5	25	
689	Sonu Prasad Baniya	3040960	727732	82	0.46	30	
690	Santa Ram Lodh	3040963	727740	82	0.58	30	
691	Gokhana Lodh	3040973	727753	82	0.7	30	
692	Raj Kumar Lodh	3040991	727732	82	0.43	40	
693	Dhurba Nath Pathak	3040871	727685	84	0.17	35	
694	Gopi Yadav	3040853	727682	83	0.58	35	
695	Jang Bahadur Baniya	3040854	727678	83	0.43	115	
696	Jagesh Tripathi	3040829	727676	82	0.5	200	
697	Jagarnath Baniya	3040826	727679	82	0.58	115	
698	Brijesh Kumar Tripathi	3040834	727666	82	0.2	200	
699	Nakhdeshwor Baniya	3040844	727658	82	0.14	40	
700	Kripa Sagar Mari Tripathi	3040829	727640	81	0.2	205	

Tube Well Depth with Co-ordinates at Ward No 11							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
1202	Shree Durga Temple	3045353	721471	65	0.26	80	
1203	Manan Dhobi	3045371	721432	67	0.18	80	
1204	Shankar Dhobi	3045379	721433	67	0.25	80	
1205	Abdul Majij	3045394	721435	69	0.38	20	
1206	Abdul Kalam	3045402	721437	69	0.2	75	
1207	Pradhan Kumar Pasi	3045407	721436	70	0.18	120	
1208	Somai Pasi	3045426	721436	70	0.53	28	
1209	Sunaulalaah Musalman	3045408	721445	71	0.36	20	
1210	Radhe Shyam Barhi	3045406	721452	72	0.36	20	
1211	Kalamudin Musalman	3045350	721430	71	0.25	80	
1212	Abdul Manan	3045349	721426	71	0.15	80	
1213	Abdul Barik	3045345	721420	72	0.28	80	
1214	Inamulalaah Musalman	3045351	721415	72	0.31	80	
1215	Mustafa Musalman	3045341	721401	71	0.23	80	
1216	Mustafa Musalman	3045336	721397	72	0.24	80	
1217	Mohamad Sikandar Sekh	3045324	721386	70	0.18	80	
1218	Raghunandan Kohar	3045327	721373	71	0.18	80	
1219	Abdl Afase	3045322	721357	71	0.31	82	
1220	Muktar Ali	3045309	721333	72	0.46	20	
1221	Samsudhin Musalman	3045312	721335	72	0.29	80	
1222	Abdul Rahim	3045311	721330	72	0.43	15	
1223	Jamsed Musalman	3045309	721342	72	0.29	80	
1224	Manoj Kumar Bhuj	3045308	721318	73	0.28	80	
1225	Shiv Temple	3045261	721221	73	0.43	15	
1226	Ram Prasad Gupta	3045093	721250	74	0.05	115	
1227	Muslim Musalman	3045092	721258	75	0.12	200	
1228	Inamulalaah Musalman	3045090	721262	75	0.7	20	
1229	Bahuti Teli	3045082	721262	76	0.22	210	
1230	Santaram Teli	3045083	721273	76	0.18	200	
1231	Lala Musalman	3045081	721293	76	0.19	210	
1232	Ahamad Husen	3045071	721280	77	0.28	215	
1233	Mohamad Husen	3045067	721285	77	0.02	215	
1234	Pradip Gupta	3045059	721286	77	0.16	200	
1235	Pradip Gupta	3045055	721282	78	0.01	200	
1236	Kalamudin Musalman	3045035	721282	78	0.18	60	
1237	Najabudin Musalman	3045052	721305	78	0.25	85	
1238	Nasrudin Musalman	3045041	721303	79	0.24	85	
1239	Sailadu Nisha	3045037	721308	79	0.02	85	
1240	Jaharu Nisha Gaddhi	3045043	721310	79	0.04	215	
1241	Wesh Mohamad	3045019	721307	80	0.15	210	
1242	Husen Ali	3045001	721302	80	0.08	160	
1243	Mustakim Darji	3045003	721291	81	0.23	80	
1244	Pramukh Yadav	3045002	721280	81	0.24	80	
1245	Abdulalaah Darji	3045009	721281	76	0.19	80	
1246	Pramukh Yadav	3045015	721275	86	0.05	200	
1247	Hafiuulalaah Musalman	3045010	721266	90	0.03	200	
1248	Mohamad Shaed	3045018	721259	90	0.07	215	
1249	Abdul Salam	3045015	721243	91	0.31	80	
1250	Ghamsan Musalman	3045006	721239	90	0.09	200	Mashina

Tube Well Depth with Co-ordinates at Ward No 11							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
1251	Samsudin Musalman	3044991	721238	90	0.1	105	Tole
1252	Rahamulalaah Musalman	3044982	721222	91	0.02	200	
1253	Abdul Salam	3044966	721215	91	0.02	170	
1254	Kalamudin Gaddi	3044962	721238	90	0.02	200	
1255	Muslim Dhobi	3044949	721246	90	0.02	200	
1256	Abdul Salam	3044940	721254	89	0.25	110	
1257	Mangal Yadav	3044939	721270	88	0.26	80	
1258	Pintu Kahar	3044934	721268	88	0.24	80	
1259	Shiv Karan Kurmi	3044940	721230	88	0.04	150	
1260	Aabad Kurmi	3044938	721228	92	0.6	20	
1261	Rajendra Prasad Kurmi	3044930	721220	91	0.23	160	
1262	Abu Hareram	3044933	721227	91	0.35	140	
1263	Karamsen Gaddi	3044922	721229	91	0.43	125	
1264	Sarifhasen Gaddi	3044915	721240	91	0.18	125	
1265	Mansav Musalman	3044967	721258	91	0.36	140	
1266	Mansav Musalman	3044969	721263	91	0.08	250	
1267	Akram Gaddi	3044969	721265	90	0.15	150	
1268	Mahashib Gaddi	3044968	721275	90	0.03	220	
1269	Dinesh Yadav	3044972	721279	90	0.06	180	
1270	Abdul Rob Sekh	3044962	721281	90	0.17	180	
1271	Dan Bahadur Gaddi	3044969	721289	89	0.05	150	
1272	Abdul Manan Gaddi	3044967	721298	88	0.02	145	
1273	Ram Lal Yadav	3044976	721307	88	0.03	140	
1274	Salim Gaddi	3045032	721331	88	0.63	20	
1275	Kalim Gaddi	3045035	721336	88	0.63	20	
1276	Swarat Musalman	3045034	721347	88	0.77	20	
1277	Mashur Ali	3045030	721364	88	0.43	20	
1278	Abdul Wdadu	3045024	721379	88	0.46	18	
1279	Inus Musalman	3045015	721390	88	0.33	20	
1280	Abdul Gofar	3045015	721408	89	0.2	120	
1281	Abdul Gofar	3045020	721405	90	0.53	120	
1282	Abdul Gofar	3045023	721403	89	0.29	205	
1283	Atiulalaah Sekh	3045014	721415	89	0.35	20	
1284	Birendra Kohar	3045009	721430	89	0.38	85	
1285	Jag Prasad Kohar	3045002	721449	89	0.38	85	
1286	Kalimulalaah Musalman	3044993	721468	88	0.33	80	
1287	Ghanshyam Musalman	3044990	721471	88	0.7	20	
1288	Tribeni Kohar	3044988	721494	88	0.43	20	
1289	Bhagwati Teli	3044986	721502	88	0.44	20	
1290	Bhagwati Teli	3044988	721505	88	0.26	80	
1291	Nafik Musalman	3044979	721503	88	0.23	25	
1292	Guddu Musalman	3044978	721509	88	0.7	20	
1293	Nafik Gaddi	3044983	721517	88	0.43	20	
1294	Nafik Gaddi	3044989	721525	88	0.33	18	
1295	Shiv Kumar Gupta	3045002	721526	88	0.58	20	
1296	Laxmi Gupta	3045000	721526	88	0.5	20	
1297	Dinesh Gupta	3045002	721536	87	0.29	20	
1298	Binodh Kumar Yadav	3045010	721540	87	0.36	20	
1299	Binodh Kumar Yadav	3045007	721538	87	0.58	20	
1300	Tulsi Yadav	3045047	721518	87	0.58	20	

Tube Well Depth with Co-ordinates at Ward No 12							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
1001	Amerca Chai	3035563	723718	38	0.32	45	
1002	Anita Chai	3035556	723717	41	0.33	45	
1003	Sananira Kalwar	3035543	723715	43	0.41	40	
1004	Mitthu Jaisawal	3035531	723719	44	0.31	40	
1005	Dipak Pandey	3035535	723737	73	0.21	40	
1006	Ram Kewal Malah	3035503	723720	73	0.1	30	
1007	Sakuntra Malah	3035489	723722	73	0.31	50	
1008	Sel Kumari Kahar	3035519	723686	73	0.28	55	
1009	Bindi Lodh	3035477	723722	72	0.29	55	
1010	Parwati Lodh	3035485	723746	73	0.5	50	
1011	Pancham Yadav	3035457	723751	72	0.35	150	
1012	Nandlal Lodh	3035472	723769	73	0.2	43	
1013	Darshan Lodh	3035466	723784	72	0.22	45	
1014	Koteshwor Chai	3035454	723773	73	0.15	45	
1015	Raju Chai	3035450	723775	72	0.33	30	
1016	Ram Kumar Chai	3035445	723778	72	0.35	45	
1017	Rajesh Chai	3035444	723783	72	0.41	40	
1018	Shiv Kumar Chai	3035439	723777	72	0.29	125	
1019	Malkhana Lodh	3035437	723788	72	0.21	135	
1020	Paltu Lodh	3035437	723798	72	0.35	100	
1021	Shankar Kahar	3035446	723803	72	0.31	105	
1022	Shaltu Lodh	3035450	723816	73	0.3	35	
1023	Pasan Lodh	3035454	723816	73	0.25	190	
1024	Bishambar Lodh	3035450	723824	73	0.28	125	
1025	Birendra Kahar	3035442	723838	73	0.5	150	
1026	Pancham Kahar	3035428	723839	74	0.42	30	
1027	Sona Lodh	3035421	723867	74	0.31	30	
1028	Letuna Lodh	3035422	723869	74	0.36	30	
1029	Laxman Lodh	3035426	723876	74	0.31	40	
1030	Chholayee Lodh	3035415	723873	74	0.26	40	
1031	Radhe Shyam Lodh	3035434	723873	74	0.2	40	
1032	Binda Kumar Chai	3035434	723869	74	0.19	40	
1033	Adalat Chai	3035445	723887	75	0.21	60	
1034	Tolan Lodh	3035450	723899	75	0.2	45	
1035	Sarda Lodh	3035441	723909	75	0.5	30	
1036	Sudama Chai	3035473	723891	76	0.16	40	
1037	Darshan Lodh	3035491	723887	76	0.28	150	
1038	Ram Gobind Lodh	3035503	723884	75	0.35	40	
1039	Pade Lodh	3035506	723886	76	0.32	40	
1040	Paltu Chai	3035519	723886	76	0.31	40	
1041	Bishwonath Lodh	3035507	723918	75	0.1	35	
1042	Raj Kumar Lodh	3035498	723917	76	0.29	45	
1043	Angat Chai	3035474	723915	77	0.2	40	
1044	Ramesh Chai	3035477	723935	76	0.3	45	
1045	Raju Chai	3035476	723940	76	0.25	45	
1046	Guchi Chai	3035481	723941	77	0.31	45	
1047	Mithu Chai	3035478	723950	76	0.36	55	
1048	Radhe Shyam Chai	3035477	723954	76	0.33	35	

Tube Well Depth with Co-ordinates at Ward No 12							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
1049	Ghanshyam Lodh	3035474	723979	76	0.36	40	Aama
1050	Ghanshyam Lodh	3035467	723900	77	0.38	40	Tole
1051	Ram Dev Yal Kumal	3035475	724011	77	0.53	40	
1052	Brelal Chai	3035472	724029	77	0.21	40	
1053	Dur Bijay Pandey	3035473	723878	79	0.25	40	
1054	Dharmendra Lodh	3035494	723863	79	0.27	40	
1055	Balram Lodh	3035486	723871	79	0.25	40	
1056	Suresh Lodh	3035479	723846	79	0.21	45	
1057	Suresh Lodh	3035482	723848	79	0.31	45	
1058	Neshankar Yadav	3035456	723864	79	0.31	210	
1059	Purwashi Yadav	3035457	723845	79	0.22	150	
1060	Ram Saday	3035430	723806	79	0.36	40	
1061	Ram Sabha Badayee	3035430	723810	79	0.15	40	
1062	Tara Devi Lodh	3035413	723808	79	0.29	200	
1063	Kishan Kahar	3035411	723800	79	0.28	200	
1064	Dinesh Lodh	3035418	723793	78	0.29	35	
1065	Ganesh Lodh	3035422	723784	78	0.31	20	
1066	Bhuwal Lodh	3035423	723772	78	0.31	45	
1067	Aashik Ali	3035410	723833	79	0.24	60	
1068	Adhani Sdaya	3035396	723844	78	0.21	45	
1069	Charanjit Barhi	3035395	723859	78	0.36	40	
1070	Ramjit Lodh	3035400	723869	78	0.25	30	
1071	Bhim Bahadur Sahani	3035384	723866	78	0.46	75	
1072	Dya Chai	3035382	723871	78	0.38	40	
1073	Amar Chai	3035385	723876	77	0.06	40	
1074	Shani Lodh	3035393	723884	78	0.3	40	
1075	Taulan Lodh	3035380	723884	78	0.41	47	
1076	Raj Kumari Dhobi	3035352	723879	78	0.3	50	
1077	Phula Lodh	3035417	723906	77	0.35	30	
1078	Malhu Lodh	3035371	723918	78	0.38	110	
1079	Rafik Dhobi	3035360	723907	78	0.31	40	
1080	Prabhu Lodh	3035368	723927	78	0.35	45	
1081	Shivdiyal Kahar	3035362	723918	78	0.29	45	
1082	Baikun Nisha	3035357	723921	78	0.46	100	
1083	Rajit Dhobi	3035349	723916	78	0.35	65	
1084	Aslam Mahabub	3035329	723924	78	0.36	90	
1085	Ghamalu Sahani	3035331	723941	78	0.5	100	
1086	Pramod Bishwokarma	3035334	723950	78	0.46	100	
1087	Binod Bishwokarma	3035347	723957	78	0.45	100	
1088	Taulan Sahani	3035345	723963	77	0.26	90	
1089	Binodh Bishwokarma	3035361	723962	77	0.38	100	
1090	Munshi Dhuniya	3035324	723952	78	0.35	30	
1091	Munibati Sah	3035323	723960	78	0.25	40	
1092	Phula Chai	3035319	723970	78	0.63	30	
1093	Egrish Dhobi	3035317	723978	78	0.58	30	
1094	Samar Gupta	3035313	723978	78	0.25	126	
1095	Paltan Nau	3035308	723985	79	0.35	45	
1096	Shakhula Dhobi	3035318	723987	79	0.36	40	

Tube Well Depth with Co-ordinates at Ward No 12

GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
1097	Shipahi Dhuniya	3035314	723997	78	0.23	65	
1098	Raituna Churihar	3035310	723997	78	0.21	110	
1099	Aama Tole (Public)	3035328	723888	79	0.77	40	
1100	Shree Ram Kahar	3035331	723875	79	0.34	50	

Tube Well Depth with Co-ordinates at Ward No 13							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
901	Kamlabati Sahani	3035531	721146	88	0.38	40	
902	Sobha Chai	3035510	721131	71	0.41	60	
903	Rauwab Musalman	3035475	721178	71	0.46	80	
904	Amrica Yadav	3035469	721193	71	0.63	70	
905	Mahesh Sah	3035452	721130	72	0.38	45	
906	Kalidaha Tole (Public)	3035444	721128	71	0.5	60	
907	Marukh Ali	3035443	721114	72	0.41	70	
908	Tribhuwan Sahani	3035434	721113	72	0.58	75	
909	Hamja Ali Fakir	3035435	721108	71	0.28	45	
910	Om Bahadur Yadav	3035416	711121	71	0.25	42	
911	Shyam Sundar Yadav	3035413	721133	71	0.5	70	
912	Ajmat Ali	3035431	721103	71	0.29	70	
913	Bholan Chai	3035413	721097	70	0.25	110	
914	Jainudin Musalman	3035391	721079	70	0.3	75	
915	Tabarak Ali	3035398	721072	70	0.38	70	
916	Nasahud Musalman	3035399	721063	71	0.31	70	
917	Samsudhin Musalman	3035385	721067	71	0.7	80	
918	Ruwab Ali Fakir	3035381	721057	71	0.46	60	
919	Mahendra Yadav	3035391	721039	72	0.36	70	
920	Mahendra Yadav	3035407	721032	72	0.5	75	
921	Rasid Ahamad	3035370	721040	73	0.25	120	
922	Anarjit Sahani	3035357	721050	72	0.36	70	
923	Abdul Salam	3035333	721048	73	0.35	125	
924	Hatikulalaah Musalman	3035319	721057	73	0.46	60	
925	Jamal Musalman	3035339	721042	73	0.33	80	
926	Jalaludin Musalman	3035364	721030	74	0.36	60	
927	Akbal Ahamad	3035344	721025	74	0.36	40	
928	Karudin Musalman	3035343	721025	74	0.38	105	
929	Devchandra Yadav	3035342	721017	75	0.17	130	
930	Dhanshyam Sahani	3035330	721027	75	0.33	120	
931	Dhanshyam Sahani	3035322	721032	75	0.33	120	
932	Raju Yadav	3035327	721005	75	0.29	120	
933	Rajendra Sahani	3035312	721026	73	0.24	120	
934	Ojan Chai	3035302	721032	73	0.21	105	
935	Ramesh Prasad Sahani	3035307	720996	75	0.21	115	
936	Dinesh Chai	3035304	720987	75	0.23	110	
937	Mukesh Sahani	3035299	720992	74	0.33	135	
938	Abdulalaah Musalman	3035289	720980	75	0.36	135	
939	Nasibdar Musalman	3035285	720967	74	0.3	180	
940	Abdul Ahamad	3035293	720971	74	0.21	125	
941	Ajib Khan	3035284	720977	75	0.17	120	
942	Tauwab Musalman	3035270	720977	75	0.28	120	
943	Ajul Nisha	3035273	720954	75	0.21	120	
944	Jahadul Nisha	3035279	720936	74	0.15	130	
945	Mohamad Nisha Khan	3035267	720932	74	0.31	125	
946	Nisaf Ali	3035234	720950	74	0.31	115	
947	Anbar Ali	3035227	720956	74	0.3	115	Kalidaha
948	Juman Ansari	3035223	720965	74	0.3	115	Tole
949	Rehamat Ali	3035217	720971	74	0.38	115	
950	Ajij Jolaha	3035213	720979	74	0.25	160	

Tube Well Depth with Co-ordinates at Ward No 13							
GPS No.	Name	Northing	Easting	RL	Discharge	Depth(ft)	Remarks
951	Ramdulalaah Musalman	3035245	720916	75	0.3	115	
952	Mohamad Ali	3035248	720906	76	0.13	150	
953	Salman Musalman	3035236	720911	81	0.16	150	
954	Mohamad Musalman	3035241	720906	82	0.15	150	
955	Sahabudin Musalman	3035242	720897	82	0.26	115	
956	Mohamad smile	3035270	720865	83	0.23	25	
957	Rahid Ahamad	3035272	720852	83	0.24	120	
958	Akbar Ali Ansari	3035283	720869	83	0.15	130	
959	Akdul Kalim	3035277	720875	83	0.1	130	
960	Irfan Ali	3035270	720890	83	0.14	100	
961	Hajrat Ali	3035318	720906	82	0.035	200	
962	Mohamad Umar	3035319	720893	81	0.38	70	
963	Mohamad Umar	3035320	720896	82	0.38	70	
964	Tjimulalaah Musalman	3035330	720898	82	0.26	75	
965	Tjimulalaah Musalman	3035331	720899	82	0.39	45	
966	Kalamudin Musalman	3035317	720884	82	0.29	45	
967	Enamulalaah Musalman	3035319	720886	81	0.29	40	
968	Mahajid	3035324	720883	81	0.17	45	
969	Aasma Khatun	3035320	720873	79	0.26	70	
970	Abdul Kadir	3035321	720872	79	0.77	70	
971	Abdul Kadir	3035322	720869	79	0.3	130	
972	Nashahudin Musalman	3035322	720857	78	0.29	60	
973	Baid Ulalaah Musalman	3035333	720858	77	0.28	100	
974	Jamsed Ahamad	3035334	720863	76	0.36	80	
975	Abdul Ohid	3035307	720880	76	0.29	55	
976	Abdul Ohid	3035300	720885	76	0.43	60	
977	Samsu Jaha	3035300	720885	76	0.31	90	
978	Mohamad Yusuf	3035295	720884	75	0.21	140	
979	Kremudin Musalman	3035302	720853	74	0.25	80	
980	Mohamad Idrish	3035252	720852	75	0.17	120	
981	Mohamad Idrish	3035245	720857	75	0.18	120	
982	Mehabub Alam	3035243	720840	75	0.2	80	
983	Amshad Musalman	3035235	720825	75	0.33	80	
984	Naserudin Musalman	3035224	720832	75	0.38	80	
985	Makud Aalam	3035224	720818	75	0.3	45	
986	Hajari Prasad Bishwokarma	3035238	720805	74	0.21	120	
987	Ahamad Ali	3035250	720813	74	0.2	120	
988	Naeem Mohamad	3035252	720811	74	0.05	120	
989	Ahamad Ali	3035253	720805	73	0.77	80	
990	Hajan Ulalaah	3035245	720806	74	0.21	120	
991	Rafid Ahamad	3035221	720791	74	0.26	150	
992	Dhami Yadav	3035221	720777	74	0.3	75	
993	Ram Bilash Yadav	3035201	720756	73	0.46	30	
994	Tulshi Ram Yadav	3035192	720743	73	0.14	130	
995	Shahad Ali	3035191	720738	74	0.35	80	
996	Efar Ulalaah	3035203	720822	73	0.25	80	
997	Ajj Khan	3035217	720822	74	0.21	75	
998	Mohamad Ejaj	3035211	720839	74	0.3	75	
999	Mohamad Shaeed	3035194	720845	74	0.26	75	
1000	Gyasudin Musalman	3035191	720856	73	0.35	80	

ANNEX C
FIELD PHOTOGRAPHS

ANNEX C: FIELD PHOTOGRAPHS



Figure 1 : Dischargegement measurement on site



Figure 2 : Site Photographs



Figure 3 : Site Photographs



Figure 4 : Site Photographs



Figure 5 : Site Photographs



Figure 6 : Site Photographs



Figure 7 : Site Photographs



Figure 8 : Site Photographs



Figure 9 : Site Photographs

ANNEX D

SURVEY DATA FROM THE FIELD

S.N.(S.P.S)	Name	N	E	Z	discharge	Remarks
1	राम चंद्रा	3039645	724067	114	0.28	160ft.
2	Nirmala	3039642	724052	115	0.30	160ft.
3	बहिर छान	3039630	724068	113	0.25	160ft.
4.	लुट्टी छान	3039628	724074	114	0.22	160ft
5.	दूलाम लड़ मुखलान	3039650	724093	112	0.25	160ft
6.	राजेश विक्रमन	3039632	724098	112	0.31	160ft.
7.	पृष्ठ दीप्ति	3039615	724109	111	0.31	160ft.
8.	दिव्य प्रद्युम्न नाना	3039605	724115	110	0.30	160ft.
9	दिव्य कुमार देवेश देव	3039589	724150	107	0.26	160ft.
10	आगेल	3039595	724176	105	0.30	160ft.
11	विश्वा आशन	3039677	724235	102	0.29	150ft.
12	जीव दुर्गा	3039658	724027	100	0.25	180ft.
13	जीरु आशन	3039678	724025	98	0.29	160ft
14.	सुलु रहना	3039693	724018	95	0.2	160ft.
15	झगड़ छोवी	3039709	724015	94	0.33	160ft.
16	सराबदीन मुखलान	3039728	724026	92	0.35	160ft.
17	महेन्द्र दुर्गलान	3039724	724016	92	0.16	160ft.
18	कामल देव देव	3039728	723971	91	0.17	160ft.
19	आलोक 2169	3039745	723991	89	0.19	160ft.
20	राम मुखलान	3039747	723981	89	0.28	180ft.
21	गालिन धर्मी	3039730	723977	90	0.19	160ft.
22	मातृलाल मुखलान	3039749	724103	89	0.26	160ft.
23	सरामधुलान	3039767	723998	89	0.21	165ft.
24	जीवन मुखलान	3039774	724009	89	0.31	160ft.
25	जगद्विन मुखलान	3039785	723994	89	0.19	160ft.
26	वर्णत हेमन मुखलान	3039788	724023	89	0.16	160ft.
27	वाली अलि मुखलान	3039794	723993	88	0.41	160ft.
28	जीवन वाली मुखलान	3039804	724011	89	0.41	160ft.
29	सुविल द्वावल	3039812	723996	88	0.2	160ft.
30	साहिद	3039822	724005	88	0.36	160ft.
31	फुल जडान	3039801	724044	88	0.29	160ft.
32	पाला छोवी	3039798	724051	88	0.17	160ft.
33		एस्रिया 2028-3				

GPS	Name	N	E	Z	Fishage	depth	Total
33	सम्मुख कासर मृ.	3039289	723222	89	0.38	80 ft.	
34	नगरक झाली. मुख्यमान	3039282	723218	88	0.5	80 ft.	
35	महारुष झालम	3039262	723203	88	0.30	120 ft.	
36	झालविह झाली	3039258	723178	86	0.5	120 ft	
37	जेवळा खोडग	3039276	723147	87	0.46	120 ft.	
40	उ.प्रमुख लंबर	3039292	723153	88	0.38	80 ft.	
41	प्र०. उमर	3039300	723148	88	0.42	80 ft.	
42	बोलिवर्डा लोहार	3039314	723150	86	0.35	60 ft.	
43	मालितला	3039327	723139	87	0.25	70 ft.	
44	राफिक खोडग	3039342	723150	86	0.35	65 ft.	
45	नाळी तुलांड मुख्यमान	3039311	723201	87	0.175	60 ft.	M
46	मोरिन उमरमद	3039305	723136	87	0.26	70 ft.	I
47	राविमा खोडग	3039298	723119	88	0.41	90 ft.	
48	गांगला खोडग	3039282	723083	86	0.35	80 ft.	
49	राज्युदेव खोडग	3039296	723071	85	0.43	70 ft.	
50	गोडक नद्वी	3039298	723036	84	0.58	40 ft.	
51	राजेश नद्वी	3039324	723041	84	0.38	35 ft.	
52	कुपिल मुख्यमान	3039294	723058	84	0.218	60 ft.	
53	खोडग. आली	3039278	723075	84	0.36	85 ft.	
54	शेर मोहमद	3039266	723068	84	0.46	85 ft.	
55	अर्धीतराणी मुख्यमान	3039280	723033	82	0.31	160 ft.	
56	साम्युत फरा	3039254	723057	81	0.41	120 ft.	
57	उमिरुला	3039211	723060	80	0.46	75 ft.	
58	मारिम खोडग	3039241	723065	80	0.41	70 ft.	
59	साठांडला	3039221	723052	80	0.35	80 ft.	
60	वारिशा झाली	3039193	723042	79	0.25	80 ft.	
61	निमाज उमरमद	3039184	723043	78	0.30	70 ft.	
62	नवीर मोहमद	3039202	723032	78	0.41	90 ft.	
63	शिपुला नद्वी	3039216	723090	78	0.46	90 ft.	
64	वाशिंग लोधी	3039238	723132	92	0.5	75 ft.	
65	जोशीन लोधी	3039244	723154	77	0.5	135 ft.	
66	अंगुल नद्वी	3039241	723175	76	0.35	155 ft.	

Field Data Sheet

Jankapur - Ward - 3

Study of Status of Ground Water at Lumbini Saskritik Municipality Rupandehi, Lumbini Province

S No	Coordinates			Discharge (lps)	Depth (ft)	Name	Address	
	Lat (N)	Long (E)	Altitude (m)			Name	Address	
1	26	3039665	725490	75	0.22	160	राम राज लोड	
2	68	3039666	725493	76	0.35	160	प्रिया गुग्गा लोड	
3	69	3039657	725497	75	0.36	160	रिया "	"
4	70	3039652	725501	75	0.41	160	सुमित्रा लोड	
5	71	3039603	725517	75	0.31	180	जगदीश राज	
6	72	3039604	725518	75	0.33	180	रामानन्द लोड	
7	73	3039587	725530	75	0.38	130	कमला लोड	
8	74	3039578	725583	74	0.32	130	राम अमर प्रसाद लोड	
9	75	3039554	725558	74	0.22	130	धनकराज लोड	
10	76	3039533	725584	74	0.21	170	विजय लोड	
11	77	3039515	725594	73	0.24	180	सुमित्रा	
12	78	3039499	725609	73	0.31	180	लिलांड लोड	
13	79	3039492	725631	72	0.36	165	बुद्ध राम लोड	
14	80	3039490	725643	73	0.18	185	सुखेश कामा लोड	
15	81	3039471	725659	73	0.43	195	दृष्टि लोड	
16	82	3039430	725721	74	0.26	160	विश्वामित्र लोड	
17	83	3039440	725735	71	0.36	160	दृष्टि यात्रा	
18	84	3039418	725770	73	0.41	160	धनराज यात्रा	
19	85	3039411	725772	73	0.26	170	उत्तरायण यात्रा	
20	86	3039416	725795	72	0.43	120	हालांकान यात्रा	
21	87	3039399	725800	73	0.25	140	दृष्टि यात्रा लोड	
22	88	3039393	725796	73	0.23	190	विष्णुपत्र लोड	
23	89	3039387	725794	73	0.23	180	सिरगाड़ा यात्रा	
24	90	3039377	725803	74	0.41	160	सुमित्रा लोड	
25	91	3039359	725795	73	0.25	190	धनवाली लोड	
26	92	3039348	725821	73	0.31	165	रामा राज लोड	
27	93	3039341	725854	73	0.14	165	उत्तराज लोड	
28	94	3039344	725846	73	0.36	165	तिलकनाथ लोड	
29	95	3039334	725860	73	0.35	190	धुगाई लोड	
30	96	3039323	725861	73	0.2	160	धरेलिय लोड	
31	97	3039320	725904	73	0.29	170	संग यहाँलोड, जगदीश लोड	
32	98	3039318	725938	73	0.31	170	राम यहाँलोड	
33	99	3039296	725891	74	0.41	170	राजेश लोड	
34	100	3039275	725906	74	0.26	150	जित व यात्रा	

GPS	Name	N	E	Z	Discharge	Depth(ft)	Total
198	गोवडुल्ला	3042677	721622	84	0.23	195	
199	कांडा देवी	3042667	721636	80	0.22	200	
200	नजाबू चित लेरव	3042652	721629	81	0.21	125	
201	मुद्रपान मुललाला	3042643	721631	81	0.13	195	
202	उत्तरांज भालिवार	3042620	721614	81	0.22	195	
203	शब्दुल कंधुम	3042598	721598	81	0.18	180	
204	सालिला रवान	3042585	721595	81	0.19	180	
205	लठाषुद्धि	3042568	721598	81	0.22	180	
206	प्रत्युषि लेरव	3042557	721608	81	0.24	130	
207	टुकुरेप्पे अहाद	3042556	721631	81	0.28	130	
208	मोहम्मद रजा	3042557	721644	81	0.21	120	
209	दर्जन डाली	3042558	721652	81	0.35	66	
210	षड्कगाम	3042554	721683	81	0.41	70	
211	सर्फुच्छि	3042551	721615	82	0.21	120	
212	महामति	3042548	721605	82	0.18	190	
213	प्रथमि	3042547	721606	83	0.23	122	
214	गोहिम शहर लेरव	3042548	721600	82	0.34	120	
215	समयुक्ति	3042539	721581	81	0.23	180	
216	डावडुल कलाम	3042527	721579	82	0.29	110	
217	डावडुल गोड़	3042533	721594	82	0.41	120	
218	डुनामुला	3042542	721580	81	0.25	180	
219	सालिला अहाद	3042555	721571	81	0.24	190	
220	शब्दुल मोहिम	3042565	721572	81	0.31	195	
221	शब्दुल लालिम	3042584	721603	81	0.36	200	
222	रुडत मुललाला	3042580	721607	81	0.16	190	
223	शास्त्रिलला	3042581	721617	81	0.21	140	
224	शब्दुल कर्गी	3042585	721621	81	0.31	140	
225	शब्दुल रहिम	3042598	721664	81	0.31	130	
226	शब्दुलला	3042580	721660	80	0.33	130	
227	मजिष्टुल रेहमान	3042599	721633	80	0.30	125	
228	शब्दुल राजिम	3042599	721643	81	0.31	120	
229	गोवड्दि	3042602	721654	81	0.21	105	
230	जमानुद्धि	3042606	721662	81	0.22	195	
231	डावडुल कलाम	3042565	721623	82	0.33	130	
232	शब्दुल गामि	3042526	721634	82	0.26	140	
233	मसलिवाड्डि	3042526	721613	82	0.17	130	
234	सलाहाड्डि	3042513	721606	82	0.28	180	

8/28/2021

GPS	Name	N	E	Z	Discharge	Depth	Date
235	सिंग गुलाला	3042519	721621	81	0.25	120	
236	डाविडल्ला	3042514	721623	81	0.25	120	
237	झावडल समृद्धगुलालमान	3042487	721616	83	0.21	80	2008/05/05
238	सामसल हक	3042494	721635	82	0.25	85	
239	झावडल दक्षुर	3042497	721642	82	0.46	60	5
240	तेवतर	3042486	721610	82	0.23	120	
241	गसलाल मला	3042484	721598	82	0.36	60	
242	गनवान	3042474	721600	82	0.43	80	
243	मैत्री गाजि इखेग	3042460	721599	82	0.41	120	
244	हुसागढल्ला	3042437	721592	83	0.26	120	
245	झावडल गालित	3042406	721555	82	0.25	80	
246	झावडल सबू	3042411	721591	82	0.31	195	
247	रामिक झास्म	3042371	721579	83	0.41	60	
248	झावडल रेहान	3042236	721562	83	0.22	100	
249		3042190	721558	83	0.29	120	
250	टाटु गुलालमान	3042183	721557	83	0.23	195	
251		3042192	721594	83	0.31	60	
252	मुलारक	3042121	721566	83	0.21	120	
253	गोदमध गुलालमा	3042092	721578	83	0.26	120	
254	मानेकिन	3042096	721555	83	0.35	195	
255	गोदमध लालिक	3042049	721571	83	0.21	195	
256	लिंगार गाहम	3042063	721567	82	0.33	180	
257	झावडले टालिमा	3042036	721551	82	0.28	170	
258		3042028	721547	82	0.19	150	
259	अनन्याच भाग	3041853	721467	87	0.31	185	
260	झावडले गुलालमान	3041855	721504	86	0.41	190	
261	मानेक भाग	3041843	721461	84	0.29	200	
262	मानेक भाग	3041849	721448	85	0.46	190	
263	मुखलकिन गुलालमान	3041829	721456	84	0.21	210	
264	कंपासेन गुलालमान	3041836	721446	84	0.33	185	
265	कंपियुलो	3041832	721437	84	0.31	185	
266	कंपालुलो ५५६	3041810	721447	84	0.21	150	
267	मानेक भाग ५५६	3041822	721438	83	0.23	200	
268	नियाज महान ५५६	3041807	721434	83	0.21	200	
269	मानेक भाग ५५६ ५५६	3041813	721436	83	0.38	200	
270	कंपित ५५६	3041800	721429	83	0.41	95	

GPS	Name	X	E	Z	Discharge	Depth	Tide
271	ਮਿਰੀ ਗੁ 31846	3041800	721429	83	0.35	495	
272	312919 31846	3041793	721440	82	0.26	110	
273	ਸਾਹਿਬੁਦਿਸ਼ ਮੁਸਲਮਾਨ	3041784	721400	83	0.26	110	
274	ਕਸ਼ਕਾਈ ਮੁਸਲਮਾਨ	3041775	721396	83	0.34	195	
275	H2-84 31846	3041875	721389	81	0.23	85	
276	ਅਵਤਾਰ ਪ੍ਰੇਸ਼	3041802	721392	82	0.33	110	
277	ਜੋਧਾ ਕੌਰ ਜਾਨੀ	3041799	721381	80	0.30	110	
278	ਅਵਤਾਰ ਕੁਲਾਨੀ	3041795	721373	80	0.5	100	
279	ਅਵਤਾਰ 31846	3041786	721371	79	0.29	100	
280	ਅਤੇ 31846	3041775	721360	80	0.31	100	
281	ਸੰਮਝੂਲ	3041773	721381	80	0.22	100	
282	ਫਕਵਾਲ 31846	3041767	721372	80	0.29	200	
283	ਹਸ ਬਹਲ ਲੋਡਾਰ	3041763	721378	80	0.26	75	
284	ਮਾਣਸਿ ਲੋਡਾਰ	3041759	721378	80	0.36	195	
285	ਬੁਕਕਿਲਾਲ ਲੋਡਾਰ	3041765	721366	80	0.26	75	
286	ਸਾਫ਼ਾਨਖਾ	3041747	721364	79	0.28	200	
287	ਹੁਣ ਕੁਲਾ ਭਲੀ ਟੱਕੀ	3041742	721342	79	0.25	150	
288	ਹੁਣ ਅਕੂਨੀ	3041759	721332	78	0.36	100	
289	ਸਾਫ਼ਿ 31846, ਮੁਖਲਮਾਨ	3041738	721333	78	0.35	100	
290	ਅਤੇ 31846 ਮੁਖਲਮਾਨ	3041728	721332	78	0.28	110	
291	312819 31846	3041716	721332	79	0.36	120	
292	ਸੋ. ਮੁਖ ਯਾਤਰੀ	3041716	721309	78	0.5	120	
293	ਅਥੁਥੇ	3041703	721289	78	0.026	200	
294	ਸਾਫ਼ਿ 31846	3042699	721279	78	0.21	150	
295	ਅਕੂ ਘੱਟ ਮੁਖਲਮਾਨ	3041699	721261	77	0.25	180	
296	ਕੁਡਾਜ ਅਲੋ	3041691	721280	77	0.23	150	
297	ਵਿਦਾ ਅਤੇ 31846	3041682	721290	77	0.24	135	
298	ਨਿਵਾਸ਼ਾਨ ਲੁਕ	3041674	721285	76	0.33	95	
299	ਪਰਵਾਹੀ ਗੁਪਤਾ	3041676	721307	75	0.33	190	
300	ਲਾਲ ਕ੍ਰਿਚੁਨ 31846	3041665	721309	75	0.43	140	

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0.16 0.16 0.16

Field Data Sheet

OTIS 9. 80

Study of Status of Ground Water at Lumbini Saskritik Municipality Rupandehi, Lumbini Province

	Coordinates			Discharge (lps)	Depth (ft)	Name	Address
	D'M	D'M	Altitude (m)				
101	3092589	723504	78	0.31	160	सतत वाता	
102	3092586	723505	79	0.25	185	नाना वाता	
103	3092577	723579	78	0.30	85	प्रोड्यूसरिङ	
104	3092583	723523	79	0.33	85	द्रातारी (पहाड़ी)	
105	3092568	723515	78	0.33	75	द्रावदुल ग्रामी	
106	3092528	723538	78	0.20	180	रालौ तरला	
107	3092596	723601	78	0.21	120	नजाम औषधि	
108	3092550	723610	78	0.13	120	प्रारंभ ग्रामी	
109	3092582	723622	78	0.21	115	फादा ग्रामी	
110	3092588	723622	78	0.21	105	टाटु ग्रामी	
111	3092600	723615	78	0.23	115	दालि ग्रामी	
112	3092571	723626	78	0.13	105	दालि ग्रामी (जगारका)	
113	3092554	723625	78	0.17	110	द्वितीय ओषधि	
114	3092541	723653	78	0.30	110	उमेली उल्ला	
115	3092526	723649	78	0.24	110	द्रावदुल वाली	
116	3092514	723637	78	0.23	115	देशी दस्ता	
117	3092544	723642	78	0.21	115	द्रावदुल वाली	
118	3092500	723636	78	0.15	110	काल्पनि ग्रामी	
119	3092497	723623	78	0.28	110	झोलुदि	
120	3092500	723630	78	0.10	110	दग्धुदुदि	
121	3092494	723646	78	0.23	120	गोला	
122	3092487	723660	78	0.20	165	देवदुल सिंह	
123	3092467	723654	78	0.097	115	खुल्ला इलाज	
124	3092449	723650	78	0.21	160	मुहिबुल्ला	
125	3092558	723623	78	0.28	75	गलब उद्दिन	
126	3092454	723612	79	0.26	80	पासा दार्दु ग्रामी	
127	3092459	723595	79	0.21	80	विनोद ग्रामी	
128	3092477	723605	79	0.25	85	दुर्दी लालाल	
129	3092479	723603	79	0.37	110	दलाल लालाल	
130	3092479	7235897	78	0.37	80	दारिंग लालालगारा	
131	3092474	723583	79	0.24	80	दारिंगा गुस्तालगारा	
132	3092442	723578	80	0.20	80	दर्दुरुला	
133	3092482	723580	80	0.23	80	दारिंग लालगारा	
134	3092501	723570	80	0.24	95	दर्दुला ग्रामी	
135	3092490	723561	81	0.18	100	विरण प्रसार बाटी	
136	3092482	723555	82	0.23	80	दर्दुल दर्दुल बाटी	
137	3092472	723557	82	0.36	85	लाल लालगारा बाटी	
138	3092473	723561	82	0.25	85	लाल लालगारा बाटी	

Field Data Sheet

प्र० ४०

Study of Status of Ground Water at Lumbini Saskritik Municipality Rupandehi, Lumbini Province

	Coordinates			Discharge (lps)	Depth (ft)	Name	Address
	D'M	D'M	Altitude (m)				
1498	3042965	723556	82	0.20	85	गुलाबी	
1500	3042962	723561	82	0.31	80	हुल्ला देवी	
1413	3042997	723553	83	0.31	80	संचरा दुर्गा	
1424	3042452	723523	83	0.43	80	झारहुला दक्षिण	
1435	3042494	723521	84	0.23	80	झारहुला दक्षिण	
1446	3042430	723522	85	0.38	80	झारहुला दक्षिण	
1457	3042422	723514	84	0.29	75	सामर्थनीय	
1468	3042415	723521	84	0.21	85	झारहुला शिवायत	
1479	3042422	723514	85	0.5	90	झरोदार जम्मा "	
14810	3042418	723503	85	0.38	80	पाते दोहरा	
14911	3042433	723497	86	0.40	80	झारहुला शिवायत	
15012	3042411	723884	85	0.41	86	बिजु	
15113	3042434	723484	85	0.20	90	झारहुला विहार	
15214	3042412	723960	84	0.14	90	झरोदार यात्रा	
15315	3042402	723450	84	0.58	85	झरोदार लिंगा	
15416	3042287	723429	83	0.53	80	झरोदार २१६९	
15517	3042263	723432	83	0.43	110	झरोदार २५६९	
15618	3042270	723468	84	0.33	110	झरोदार २५६९	
15719	3042287	723456	83	0.7	73	झरोदार २१६९	
15820	3042426	723437	83	0.38	70	झरोदार झुमाल	
15921	3042442	723436	84	0.25	70	झरोदार झुमाल	
16022	3042453	723441	83	0.35	75	झरोदार यास तरिजन	
16123	3042459	723442	83	0.43	85	झरोदार यास तरिजन	
16224	3042461	723447	83	0.43	95	झरोदार लोहल तरिजन	
16325	3042456	723462	82	0.91	75	झरोदार लोहल तरिजन	
16426	3042455	723477	83	0.96	95	झरोदार "	
16527	3042486	723498	77	0.30	180	झिल्लाल घास	
16628	3042473	723457	85	0.43	100	झरोदार	
16729	3042464	723488	86	0.22	85	झरोदार	
16830	3042606	723526	85	0.38	80	झरोदार झरोदार	
16931	3042593	723539	85	0.46	80	झरोदार झरोदार	
17032	3042595	723554	85	0.33	160	झरोदार लोहार	
17133	3042585	723551	85	0.2	85	झरोदार	
17234	3042592	723577	85	0.30	110	झरोदार लोहार	
17335	3042595	723592	85	0.36	110	झरोदार लोहार	
17436	3042530	723660	84	0.31	100	झरोदार लोहार	
17537	3042560	723602	85	6.39	100	झरोदार लोहार	
17638	3042579	723535	85	0.24		झरोदार ७१३ लोहार	

Field Data Sheet

Ward No. 6 चौमाटोल

Study of Status of Ground Water at Lumbini Saskritik Municipality
Rupandehi, Lumbini Province

	Coordinates			Discharge (lps)	Depth (ft)	Name	Address
	D'M	D'M	Altitude (m)				
177 1	3042567	723574	86	0.46	100	सातुर्पाल	पुण्यगाँव
178 2	3042608	723558	85	0.25	110	खान लक्ष्मी	लोहार
179 3	3042617	723553	85	0.14	110	खन सुनील	लोहार
180 4	3042614	723564	84	0.46	100	खन शंकर	लोहार
181 5	3042617	723570	85	0.25	110	खन नाना लोहार	
182 6	3042627	723577	85	0.20	110	अमालिनी	पुण्यगाँव
183 7	3042640	723572	85	0.13	110	श्री गढ़ी	
184 8	3042632	723561	86	0.25	162	खन प्रतीक	गैरी
185 9	3042634	723553	86	0.15	160	खन बिजेश्वर	गैरी
186 10	3042633	723546	86	0.07	120	खनेश	गैरी
187 11	3042629	723532	87	0.09	80	पुण्यगां	21169
188 12	3042613	723553	86	0.11	110	खनलाल	आडी
189 13	3042619	723518	86	0.32	120	लाल-पाल	21169
190 14	3042641	723521	85	0.26	160	लालदेवी	पुण्यगाँव
191 15	3042649	723526	86	0.22	160	लालदेवी	पुण्यगाँव
192 16	3042652	723542	85	0.23	160	लाल	गैरी
193 17	3042658	723551	85	0.14	160	लिलाल	गैरी
194 18	3042656	723556	86	0.17	160	खनलाल	21169
195 19	3042676	723553	85	0.26	160	लाल	21169
196 20	3042639	723508	86	0.24	120	आठिकाली	खनलाल
197 21	3042677	723511	86	0.14	180	लाल	योगी 21169
198 22							
199 23							
200 24							
25							

GPS	Name	N	E	Z	Discharge Depth (ft)	Tide
300	कैलास पतिष्ठित	3040113	720847	50	0.15	160
301	राम शपा मुदिर	3040118	720838	51	0.13	120
302	विठोड़	3040101	720815	52	0.20	35
303	राज बंकर मिश्रा	3040127	720803	53	0.30	120
304	जोगेश नाथ मिश्रा	3040137	720805	54	0.21	150
305	श्याम सरू तेली	3040108	720801	55	0.25	180
306	महेश्वर शाह	3040119	720798	56	0.26	120
307	गृष्ण शाह	3040116	720790	57	0.20	120
308	लक्ष्मी नारायण दुर्गी	3040125	720791	57	0.21	160
309	बहादुर	3040197	720788	58	0.35	160
310	कृष्ण राम कुमारी	3040151	720775	60	0.22	160
311	आमन बगल चाहत	3040125	720772	59	0.26	120
312	महाराजा टोल (खलाती)	3040102	720760	60	0.22	160
313	सुरभाल चौधार	3040143	720742	62	0.28	170
314	कर्पर चाहत	3040147	720740	61	0.23	170
315	जितेश भाऊ	3040132	720746	64	0.14	120
316	बेकाम छोड़े	3040161	720752	62	0.24	160
317	दिलिप उपहारा	3040125	720737	65	0.20	120
318	राज नारायण घास	3040187	720753	65	0.15	110
319	वराम गोहा अग्रिमा	3040102	720736	65	0.24	160
320	पिट्टु अग्रिमा	3040095	720730	66	0.19	120
321	त्रिलोक गुर्जता	3040081	720744	66	0.21	150
322	गुर्जिराम	3040082	720735	68	0.14	160
323	बड़ी अग्रिमा	3040076	720725	67	0.20	120
324	आरती अग्रिमा	3040069	720722	68	0.41	120
325	हिमला अग्रिमा	3040066	720712	69	0.35	120
326	राजा राजाराम हगिमा	3040067	720726	69	0.14	120
327	राम लेखपाल	3040053	720720	71	0.23	160
328	रामामुल्ला जहाँ	3040063	720704	71	0.38	160
329	गोविल्लू कुमारी	3040049	720797	71	0.24	130
330	मनान गोदी	30401022	720702	72	0.33	160
331	गोविन दुर्गी	3640025	720687	72	0.35	130
332	सिवक्ष चाहत	3039976	720720	72	0.28	110
333	राम बंजाली मुक्ति	3040093	720648	74	0.16	
334	ओम भलास पाणे	3040075	720690	75	0.35	110

GPS	Name	N	E	Z	Discharge	Depth	Total
335	इंगमां पाने	3040086	720681	76	0.35	160	
336	"	3040074	720671	77	0.38	160	
337	राजेश्वर लोहार	3040080	720701	77	0.33	110	
338	मधुरा भ. पाणे	3040091	720697	78	0.18	120	
339	विजयनाथ पाणे	3040160	720698	78	0.20	110	
340	रामलय लोहिया	3040113	720690	79	0.26	100	
341	दुर्गा सोनिया	3040118	720688	79	0.20	100	
342	उमीर भ. खुकला	3040093	720680	79	0.26	125	
343	"	3040115	720671	79	0.17	120	
344		3040120	720667	79	0.31	110	
345	जितेश्वर चौहान	3040120	720712	81	0.14	160	I
346	पिंडल लोहिया	3040130	720714	80	0.30	120	I
347	राज महेश लोहिया	3040140	720709	82	0.21	120	I
348	गिरा लोहिया	3040150	720706	82	0.28	130	I
349	प्रमेश्वर लोहिया	3040158	720714	81	0.35	120	I
350	हरलाल लोहिया	3040136	720696	82	0.15	160	F
351	परम्परा लिंगलाली	3040139	720699	82	0.20	120	
352	चबलुलाल लोहिया	3040139	720684	83	0.25	160	
353	शहाता लिंगलाली	3040142	720679	82	0.23	120	
354	जामेली लोहिया	3040138	720676	82	0.23	160	
355	विष्णु दाहिर	3040143	720676	83	0.33	120	
356	ओला पाणी	3040141	720663	82	0.35	125	
357	गणिका नेली	3040155	720647	82	0.22	120	
358	खिठोष पाणी	3040167	720646	82	0.25	160	
359	सरतराम पाणी	3040170	720651	82	0.24	160	
360	भद्र पाणी	3040174	720657	82	0.22	160	
361	खेयर आठवा	3040191	720658	82	0.29	130	
362	सुवास पाणी	3040193	720671	82	0.33	130	
363	बहादुर पाणी	3040161	720677	84	0.20	135	
364	बाबूराम लोहार	3040155	720687	84	0.36	130	
365	लोहिला लोहार	3040159	720690	84	0.28	120	
366	शंखेश्वर जाधववार	3040160	720706	84	0.21	110	
367	गोवा पाणी	3040180	720693	83	0.25	160	
368	सरतोष लिंगलाली	3040151	720685	83	0.25	110	
369	बडाहुर पाणी	3040142	720656	85	0.26	125	
370	सुमित्रा पाणी	3040144	720645	84	0.22	160	

GPS	Name	N	E	Z	Discharge	Depth	Rate
370							
371	कालिका गड्ढ	3040116	720720	84	0.26	160	
372	लोगामुद्दी गड्ढ	3040153	721804	87	0.33	195	
373	"	3040172	721810	86	0.26	185	
374	लोगोरा गड्ढ	3040154	721798	86	0.38	80	
375	लोगोरा गड्ढ	3040142	721792	86	0.29	200	
376	लोगोरा गड्ढ	3040173	721784	86	0.26	200	
377	लोगोरा गड्ढ	3040126	721792	86	0.28	200	
378	लोगोरा गड्ढ	3040124	721794	86	0.23	200	
379	लोगोरा गड्ढ	3040116	721792	86	0.33	195	
380	लोगोरा गड्ढ	3040104	721780	86	0.32	80	
381	पहुंच रास गड्ढ	3040124	721754	85	0.82	195	
382	तुलधी गम	3040121	721885	82	0.7	80	
383	किंकुरा गड्ढ	3040120	721820	87	0.58	80	
384	"	3040134	721827	87	0.18	190	
385	बिलोली गड्ढ	3040125	721828	87	0.20	90	
386	दुगो प्रयाद गड्ढ	3040104	721834	87	0.20	95	
387	दावू कोलर गड्ढ	3040116	721842	87	0.18	220	
388	देपुराडी गड्ढ	3040120	721845	87	0.25	200	
389	जार्जन गड्ढ	3040125	721850	86	0.38	150	
390	जाहोक गड्ढ	3040118	721858	86	0.33	190	
391	जानपर जालि	3040126	721866	86	0.36	80	
392	जानपर जालि	3040122	721868	86	0.22	95	
393	जानु गड्ढ	3040899	721861	86	0.38	90	
394	जटाली गड्ढ	3040088	721850	86	0.41	150	
395	पाटोडी गड्ढ	3040082	721846	86	0.18	135	
396	निरा गड्ढ	3040068	721847	85	0.30	130	
397	आसिरका गड्ढ	3040062	721853	86	0.43	150	
398	तवावा गड्ढ	3040068	721858	85	0.188	150	
399	बिक्रा गड्ढ	3040061	721862	85	0.17	150	
400	बिक्रा गड्ढ	3040086	721885	86	0.42		

GPS	Name	N	E	Z	Discharge	Depth	Total
401	सरकारी	3038161	723177	77	0.50	60	
402	अर्द्धोक्ति पट्टपत्र	3038167	723177	78	0.31	150	
403	लैलाकांत छोड़नी	3038156	723192	78	0.46	60	
404	ट्रायंपर इमोरी	3038148	723286	79	0.40	170	
405	पिंडोठाम्ब छोड़नी	3038145	723190	79	0.20	27	
406	प्राचीन छोड़नी	3038138	723191	79	0.23	90	
407	परसुराम छोड़नी	3038131	723176	78	0.20	140	
408	ज्ञानमनिषेचन छोड़नी	3038124	723180	79	0.28	80	
409	शुरैका छोड़नी	3038119	723276	79	0.26	85	
410	फ्रैंगोशा छोड़नी	3038109	723214	81	0.38	120	
411	राम-यशोर छोड़नी	3038124	723214	81	0.19	180	
412	शात्रैरा छोड़नी	3038120	723280	83	0.25	80	
413	श्रीपति छोड़नी	3038130	723231	83	0.22	175	
414	राम मनिपर	3038139	723241	83	0.29	175	
415	सर्वेशा कालार	3038140	723240	83	0.25	175	
416	अलक्ष्मीनीलकाल छोड़नी	3038136	723253	86	0.22	80	
417	शोहित छोड़नी	3038131	723259	85	0.21	160	
418	आसरकेता छोड़नी	3038119	723286	86	0.29	80	
419	सर्वजित छोड़नी	3038109	723269	85	0.18	65	
420	रामदेवन छोड़नी	3038117	723264	86	0.31	65	
421	अगोती छोड़नी	3038102	723270	86	0.38	65	
422	फिलेप छोड़नी	3038119	723280	86	0.43	60	
423	सदाप्रिया छोड़नी	3038101	723278	84	0.20	165	
424	तत्त्वज्ञानीराम विजय	3038089	723290	84	0.23	160	
425	राम-यशोर छोड़नी	3038103	723309	84	0.29	55	
426	काली मार्देह	3038101	723340	83	0.33	65	
427	11	3038114	723339	83	0.41	65	
428	श्रावेशा - एवं अ	3038065	723305	83	0.19	150	
429	शठोता छोड़नी	3038061	723307	83	0.30	65	
430	लक्ष्मण छोड़नी	3038062	723318	81	0.36	120	
431	खसिद्ध एरिना	3038055	723320	82	0.55	35	
432	मालार वामा एरिना	3038047	723319	82	0.28	60	
433	एरिना वालान	3038038	723309	81	0.15	160	
434	रमामन वामा	3033038	723319	81	0.14	109	

GPS	Name	N	E	Z	Discharge	Depth	Time
435	बुलाई	3038021	723324	81	0.15	95	
436	बलूरा इंजिन	3038021	723316	80	0.26	95	
437	रामलगान मेट्रोन	3038043	723294	80	0.16	200	
438	शुद्धे इंजिन	3038045	723281	80	0.12	95	
439	व्होमेन्ड इंजिन	3038048	723275	79	0.17	140	
440	डीएम्स इंजिन	3038064	723278	79	0.15	95	
441	ट्रायार्गांग इंजिन	3038059	723262	80	0.35	330	
442	सिवयरण इंजिन	3038054	723262	79	0.29	185	
443	उमीन प्रकाश इंजिन	3038055	723257	78	0.46	120	
444	खिंचोड़ इंजिन	3038048	723248	78	0.43	130	
445	राणे इंजिन	3038036	723234	78	0.15	80	
446	तालिब इंजिन	3038032	723231	78	0.50	85	
447	राठल इंजिन	3038024	723251	78	0.28	85	
448	सरतार इंजिन	3038058	723241	78	0.31	85	
449	ट्रॉपारा बिंगिया	3038060	723226	77	0.29	150	32
450	कटडा एंड इंजिन	3038061	723220	76	0.70	75	
451	टेक्ट छारी	3038063	723212	76	0.20	140	
452	ट्रायलर्ब बिंगिया	3038077	723234	77	0.25	95	
453	शुल्क छारी	3038075	723206	76	0.20	140	1
454	प्रोबिन लाल	3038084	723209	76	0.18	70	
455	धुरपते छारी	3038097	723164	76	0.46	75	
456	व्हालराज छारी	3038082	723171	75	0.17	160	
457	व्हालराज कुमारी	3038145	723234	76	0.33	25	8
458	व्हालर बारी	3038169	723220	77	0.58	25	6
459	शुल्क कहार	3038190	723209	77	0.13	120	6
460	राम शुमोर कुमारी	3038200	723218	78	0.15	120	6
461	शुल्क लोगारु सुना	3038211	723220	77	0.7	25	
462	ओट शाली	3038219	723227	77	0.58	35	
463	शुल्क पटवा	3038237	723228	77	0.21	100	
464	राम लोटुन पटवार	3038243	723226	77	0.21	25	
465	उगाम लोटुन पटवार	3038248	723231	77	0.25	135	
466	झर एंड कुमारी	3038261	723291	81	0.21	120	
467	परस लाली	3038265	723240	80	0.23	30	
468	ट्रायलर अली	3038258	723269	79	0.20	30	
469	ट्रोहमर इंजिन	3038256	723266	79	0.26	22	
470	गैल अली	3038263	723274	79	0.38	40	

Field Data Sheet

Study of Status of Ground Water at Lumbini Saskritik Municipality Rupandehi, Lumbini Province

	Coordinates			Discharge (lps)	Depth (ft)	Name	Address
	D'M	D'M	Altitude (m)				
4711	3038264	723273	78	0.33	90	दार्जिया दाली	
4722	3038298	723273	78	0.14	100	पहलाहुनी	
4733	3038287	723267	78	0.26	100	सिंग तेली	
4744	3038292	723258	78	0.16	130	उत्तरा शम तेली	
4755	3038294	723246	77	0.20	150	धुग्गिया कुमी	
4766	3038307	723238	77	0.77	25	राम कुमार बुमी	
4777	3038309	723262	77	0.38	90	पात्रायरा कुमी	
4788	3038312	723266	77	0.70	35	दुग्गरीया कुमी	
4799	3038316	723268	77	0.10	90	मनोहर कुमी	
4800	3038328	723273	76	0.24	150	किंगाल मल्ली	
4811	3038330	723267	76	0.63	25	राम सुनुजा मल्ली	
4822	3038329	723262	77	0.77	20	राम कुमार मल्ली	
4833	3038332	723251	76	0.23	120	उबडुल गोलिन	
4844	3038344	723237	76	0.53	150	गुलाई जाहार	
4855	3038359	723232	76	0.33	90	शिव मंगल बोहार	
4866	3038360	723218	75	0.25	150	राखे गंगा	
4877	3038357	723210	75	0.15	120	टिक्कुङ मला	
4888	3038349	723212	75	0.25	90	राम प्रसाद बोहार	
4899	3038342	723214	75	0.14	25	लगन बोलिया	
4900	3038337	723218	75	0.58	35	पहाड़ दाली	
4911	3038332	723218	75	0.054	140	उमान दाली	
4922	3038322	723222	75	0.19	190	उक्कर डाली धुनिया	
4933	3038325	723211	75	0.18	200	पञ्चरुखिन डाली धुनिया	
4944	3038336	723226	74	0.77	25	उबडुल निसा गुललगान	
4955	3038319	723231	74	0.29	150	दिलिप उमरबाल	
4966	3038311	723227	74	0.26	130	शिल्प धुनिया	
4977	3038318	723224	74	0.20	152	उबडुल मनिया धुनिया	58
4988	3038306	723240	74	0.23	120	उबडुल निसा	
4999	3038315	723242	74	0.5	130	तस्हीर अद्दमर	

GPS	Name	N	E	Z	Discharge	Depth	Total
501	गोलिदृ याढ़व	3037514	725249	55	0.38	170	
502	द्वांगपत्री याढ़व	3037504	725249	56	0.38	160	
503	तेल याढ़व	3037497	725250	56	0.25	150	
504	दुन्दुल याढ़व	3037469	725239	57	0.43	170	
505	भुजला इरिया	3037461	725253	58	0.33	165	
506	पालाडा याढ़व	3037451	725249	59	0.29	160	
507	विनक याढ़व	3037446	725240	59	0.11	40	
508	तालित याढ़व	3037439	725217	59	0.089	165	
509	सलिराम याढ़व	3037428	725235	60	0.15	165	
510	गायारण याढ़व	3037407	725216	60	0.21	175	
511	प्रशु याढ़व	3037379	725230	61	0.36	170	
512	प्रलाप याढ़व	3037361	725214	62	0.29	160	
513	प्रुत याढ़व	3037364	725209	62	0.13	161	
514	खतराम याढ़व	3037367	725192	62	0.23	140	
515	झाजित याढ़व	3037358	725197	64	0.15	40	
516	लाड याढ़व	3037352	725192	64	0.20	150	
517	कराम किसत याढ़व	3037365	725180	64	0.58	50	
518	गायारण चौचरी गुरी	3037331	725180	65	0.23	160	
519	दुग्धधियाढ़व	3037323	725199	65	0.20	100	
520	मिळ रामत गुरी	3037316	725174	66	0.31	185	
521	सुगीर 2169	3037327	725146	66	0.24	175	
522	ग्राम फिलन गुरी	3037306	725144	66	0.40	165	
523	विश्वार 2169	3037293	725147	66	0.41	160	
524	बोल लियन 2169	3037283	725136	67	0.25	90	
525	गोदी शंकर 2169	3037279	725136	67	0.46	60	
526	दिनराम 2169	3037262	725128	67	0.38	125	
527	बोनार्डी 2169	3037260	725135	66	0.16	125	
528	सुनिष कुडार 2169	3037265	725241	67	0.29	125	
529	मुनिष कुडार	3037066	726893	687	0.38	45	
530	दिपेन गुप्ता	3037074	726886	87	0.29	45	
531	बाबुलाल तेली	3037074	726862	84	0.23	45	
532	कुमार मुप्ता	3037057	726878	84	0.58	45	
533	रामेष गुप्ता	3037050	726897	84	0.58	50	
534	कुमार छुनिया	3037039	726879	85	0.46	40	
535	ब्राह्मदेव छुनिया	3037039	726896	83	0.7	40	
536	समयुक्ति छुनिया	3037040	7268904	83	0.553	40	

GPS	Name	N	E	Z	Discharge	Depth	Total
537	સુરાણું ધૂનિયા	3037036	726897	83	0.53	40	
538	રામારામ પાયળાન	3037038	726863	84	0.43	45	
539	માનવાન ફાર્મ	3037032	726876	83	0.26	45	
540	મેરોલ ટાકુર	3037037	726857	83	0.28	45	
541	રાજીંગ પદ્માદ તેલી	3037016	726858	83	0.23	45	
542	શ્રીંગ પદ્માદ તેલી	3037004	726856	83	0.25	45	
543	પણ કુમી	3036988	726849	83	0.16	45	
544	વિષન કુમી	3036984	726854	83	0.21	40	
545	ધૂન ધૂના	3036972	726795	84	0.46	40	
546	ધૂનાં રૂટા	3036969	726790	84	0.43	45	
547	પદોછી કોઠાર	3036977	726791	83	0.5	45	
548	શોનગાતી કોઠાર	3036975	726785	84	0.26	45	
549	મુલાંકા ધૂનિયા	3036971	726778	84	0.38	35	
550	માનવાન ધૂનિયા	3036985	726770	83	0.5	35	
551	આંદેનાર આલે	3036990	726771	83	0.36	45	
552	ધોમંડ બાનિયા	3036959	726773	84	0.36	50	
553	સ્થિત કુઠાર બનિયા	3036962	726763	84	0.33	35	
554	ફિવારાલ ધૂનિયા	3036985	726762	83	0.35	45	
555	ટોલી ધૂનિયા	3036994	726765	83	0.38	45	
556	શૈલીન ધૂનિયા	3036997	726765	83	0.58	45	
557	આનિલ પાંચી	3036960	726748	84	0.53	45	
558	લારિષ ધોમંડ બનિયા	3036976	726740	84	0.35	45	
559	શિખદુલો રહેણ ધૂનિયા	3036956	726732	85	0.12	40	
560	તરણા ચાદર	3036961	726725	85	0.32	45	
561	વિસાર રાજ વિસાર	3036960	726723	85	0.22	230	
562	દુર્ગા વિસાર	3036961	726717	85	0.28	40	
563	માયા કુઠાર	3036962	726705	85	0.15	45	
564	યાસ પુનાર કોઠાર	3036942	726704	86	0.50	42	
565	લાલાંદા દોઢી	3036947	726796	85	0.41	45	
566	ઠારી પાંચી	3036935	726707	86	0.35	40	
567	..	3036934	726710	86	0.50	35	
568	સાઘ ખાંચી	3036926	726707	86	0.41	35	
569	નિર્ઝોહી લોહાર	3036917	726706	86	0.38	35	
570	સાફ્લેચ વિસારના	3036916	726702	85	0.53	45	

GPS	Name	N	E	Z	Discharge	Depth	TD
571	दिलीप शाह २१६९	3036901	726691	85	0.53	40	
572	राम अर्जुन २१६०	3036911	726684	85	0.53	40	
573	चुम्पी जल २१६३	3036910	726692	84	0.50	45	
574	पश्चात् शाह	3036890	726699	84	0.26	45	
575	छोड़तीत शाह	3036872	726687	84	0.53	45	
576	लेपिल है शुभे	3036874	726676	83	0.42	45	
577		3036901	726706	84	0.50	40	
578	काकुल २१६७	3036902	726709	84	0.36	40	
579	राम अर्जुन २१६७	3036900	726716	84	0.53	40	
580	गोविंद २१६९	3036892	726721	84	0.36	40	
581	हरे लहाड़ २१६७	3036882	726724	83	0.29	160	
582	रजा राम २१६७	3036838	726717	83	0.63	40	
583	॥	3036863	726708	82	0.53	40	
584	देवी बनिया	3036865	726730	83	0.31	30	21
585	धोन सामृद्धि अहिंसा	3036852	726728	83	0.33	40	45
586	बनस्त्राम बनिया	3036867	726746	83	0.39	45	55
587	अनुप शुभा २१६९	3036846	726742	83	0.38	35	1
588	स्वल्पराम उमरी	3036841	726748	84	0.32	40	20
589	ठारी नारी	3036830	726752	84	0.38	45	
590	रामदेवी नारी	3036827	726745	84	0.36	45	
591	ठारी अर्जुन पाली	3036797	726746	83	0.25	45	
592	राम लोट	3036763	726743	83	0.35	40	
593	खेलायी लोट	3036761	726735	82	0.30	35	
594	सितापास लोट	3036762	726723	82	0.36	30	
595	शार्दूल पाली	3036783	726764	84	0.28	45	
596	वारुन शुभा	3036876	726777	83	0.28	45	
597	राम गणेश शुभा	3036792	726787	84	0.23	205	
598	॥	3036792	726787	83	0.5	45	
599	चुम्पी शुभा	3036793	726791	83	0.58	35	
600	अमृत-वर्ग लोट	3036807	726780	84	0.38	45	

GPS	NAME	N	E	Z	Discharge	Depth	Total
601	गणेशापुरी	3041782	727387	84	0.43	150	
602	श्रीवैद्यपात्र भानु	3041800	727359	77	0.38	170	170
603	डानारुद्धा भानु	3041833	727371	78	0.38	165	
604	पवारा दिग्जिन	3041800	727335	79	0.30	75	
605	राम नरेश पाठुल	3041804	727317	80	0.31	170	
606	राम पवारा पाठुल	3041799	727309	81	0.31	170	
607	चिंतोरु दिग्जिन	3041792	727309	81	0.33	175	
608	ठिपक दिग्जिन	3041794	727303	81	0.38	165	
609	राम कुमार दिग्जिन	3041787	727282	83	0.17	150	
610	राम मिलन दिग्जिन	3041781	727280	83	0.23	170	170
611	गुलाब भ. दिग्जिन	3041785	727254	84	0.09	160	160
612	प्रेक्ष संकार	3041776	727243	85	0.14	160	160
613	श्रव्युष्णि देव (संकार)	3041778	727234	85	0.33	170	170
614	नारोद्रुप पाठुल	3041800	727234	86	0.33	160	160
615	ओरोद्रुप पाठुल	3041804	727247	87	0.20	160	
616	राम लालित पाठुल	3041850	727236	87	0.41	150	
617	उपसीक्षण घरल	3041825	727212	88	0.23	160	160
618	राम देवक घरल	3041810	727215	89	0.70	35	
619	विहारी पुरी	3041807	727222	89	0.24	170	
620	उपेश कुमी	3041806	727187	89	0.25	170	
621	सरगजित पाठुल	3041804	727205	90	0.58	30	
622	प्रथिप घरल	3041784	727200	91	0.22	180	
623	गंगामाल भ. कुमी	3041779	727212	91	0.35	145	
624	त्रिविणी घोली	3041772	727197	91	0.058	180	180
625	राम खलित	3041751	727192	91	0.21	160	
626	विल धानारहिमा	3041737	727204	91	0.41	150	
627	राम लखवण "	3041741	727209	91	0.08	120	
628	विंदु कुमी	3041743	727218	91	0.06	185	

619	NAME	N	E	Z	Discharge	Depth	Date
629	देवमोहन शर्मा	3041719	727218	81	0.10	180	
630	देवी दिलीप	3041710	727182	91	0.21	180	
631	रामेश दिलीप	3041705	727175	90	0.31	180	
632	शंकर दिलीप	3041699	727189	90	0.14	160	
632	दिलीप पाल	3041691	727159	89	0.35	180	
634	देवल अरबल	3041689	727198	90	0.25	100	
635	लगभग बाहुदूर	3041697	727215	91	0.33	50	
636	गुरुसी नाथ	3041687	727219	91	0.31	60	
637	प्रेरणा कुमारी	3041700	727240	91	0.15	200	
638	मधुवर्णी (खट्टारी)	3041728	727257	91	0.16	150	10/10/2023
639	दीपा आम कुमारी	3041121	727820	83	0.53	40	10/10/2023
640	दीपा लोढ़	3041106	727821	83	0.58	40	
641	विरेन्द्र कुमारी	3041114	727825	83	0.53	40	
642	मेंशी लोढ़	3041112	727835	83	0.050	35	
643	लोढ़ पर्वत लोढ़	3041098	727820	83	0.63	150	
644	रामेश्वर लोढ़	3041106	727823	83	0.63	50	10/10/2023
645	बचेंद्र लोढ़	3041092	727803	83	0.36	45	5
646	पुरुषमन गाँवल	3041070	727779	83	0.17	110	10/10/2023
647	गोपन लोढ़	3041041	727772	83	0.38	120	10/10/2023
648	ठाकुरलाला लोढ़	3041042	727796	83	0.58	40	10/10/2023
649	आरत लोढ़	3041037	727768	84	0.58	40	10/10/2023
650	दासिता लोढ़	3041026	727780	84	0.70	50	10/10/2023
651	सहनेश कुमारी	3041046	727750	83	0.24	120	
652	षुधनी पुर्च	3041015	727754	84	0.20	200	
653	पुष्पराधी वर्णी	3040993	727756	84	0.41	30	
654	॥	3040988	727757	85	0.43	30	
655	वाला गिरुवर्णी	3040996	727759	84	0.46	30	
656	दुर्घामा लोढ़	3041029	727775	84	0.43	30	
657	देवा कुमार वर्णी	3040992	727777	84	0.7	30	

GPS	Name	N	E	Z	Discharge	Depth	Total
658	जोगवर लोड	3040995	727783	84	0.71	120	
659	नेवार लोड	3040990	727786	83	0.28	100	
660	उखे बुमान लोड	3040979	727789	83	0.53	85	
661	"	3040965	727796	83	0.58	35	
662	नेवार लोड	3040965	727802	83	0.58	35	
663	"	3040962	727804	83	0.5	30	
664	जित कुर्मा	3040948	727778	83	0.87	30	
665	झेवटा लोड	3040949	727775	83	0.87	30	
666	गौलेस त्रिपठी	3040943	727757	84	0.25	195	
667	चोशापती बरही	3040957	727754	83	0.53	40	
668	नागोड़ लगिया	3040955	727744	83	0.46	170	
669	संकेत पाठक	3040942	727726	83	0.36	195	
670	आगिला कुर्मा	3040942	727714	83	0.43	35	
671	चिनक कुर्मा	3040926	727695	82	0.31	200	
672	संदेश ठाकुर	3040911	727687	83	0.46	225	
673	रामदास	3040911	727672	83	0.43	25	
674	कृष्णलाल लगिया	3040907	727666	83	0.43	40	
675	श्री लोड	3040906	727663	82	0.41	25	
676	राम चाटे लगिया	3040903	727675	83	0.53	35	
677	संकलेक पाठी	3040916	727641	82	0.5	30	
678	कांगड़ापुर लोड	3040909	727637	82	0.41	35	
679	पुणवारी लगिया	3040918	727626	81	0.5	30	
680	सोहण प. चमार	3040926	727637	82	0.36	30	
681	इगार युद्धे नाई	3040938	727640	81	0.29	195	
682	तिळ कुर्मा	3040929	727652	81	0.53	40	
683	चिनक कुर्मा	3040933	727654	80	0.53	40	
684	चिह्न कुर्मा	3040927	727668	81	0.53	35	
685	टेकड़ी कुर्मा	3040934	727617	81	0.5	35	
686	सोहाल कुर्मा	3040926	727615	81	0.53	30	
687	राम चास कुर्मा	3040924	727680	82	0.33	220	
688	कृष्ण लोड	3040954	727717	82	0.5	25	
689	सोहु प. लगिया	3040960	727732	82	0.46	30	
690	संकराम लोड	3040963	727740	82	0.58	30	

Field Data Sheet

Study of Status of Ground Water at Lumbini Saskritik Municipality Rupandehi, Lumbini Province

•	Coordinates			Discharge (lps)	Depth (ft)	Name	Address
	D'M	D'M	Altitude (m)				
69 1	3040973	727773	82	0.7	30	जोरकता लोड	
69 2	3040991	7277732	82	0.43	40	रात्रिकुमार लोड	
69 3	3040871	727685	84	0.17	35	झुल्लालय पाठ्याल	
69 4	3040873	727682	83	0.58	35	जोपी माडर	
69 5	3040854	727678	83	0.43	115	जंग लघाय बनिया	
69 6	3040829	727676	82	0.5	200	उल्लेश त्रिपाठी	
69 7	3040826	727679	82	0.58	115	जोरालाल बनिया	
69 8	3040834	727666	82	0.20	200	झुल्ले नृ. त्रिपाठी	
69 9	3040844	727658	82	0.14	40	दावतेष्वर बनिया	
700	3040829	727640	81	0.20	205	हुपायाग त्रिपाठी	
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संख्या १८

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GPS	Name	N	E	Z	Discharge	Depth	Table
701	राजोहु कुरी	3044310	728210	57	0.25	205	
702	लाल सहेल कुरी	3044303	728198	58	0.35	195	
703	2106 कुरी	3044307	728189	58	0.33	115	
704	ज्ञाम प्रकास कुरी	3044284	728214	59	0.36	120	
705	पुरात कलाना कुरी	3044308	728220	60	0.17	120	
706	सिंह कुरा चौकारी	3044322	728217	61	0.30	2010	5 30 10
707	शिंग गांव	3044295	728239	61	0.36	115	
708	खुनाश चौकारी	3044299	728263	62	0.35	115	
709	किंडोर कुरा पाट	3044322	728234	63	0.15	110	
710	खुल नर्प	3044319	728236	64	0.26	80	
711	राज नेवाल धावल	3044328	728233	65	0.43	195	
712	सुगढेह तिवारी	3044338	728239	66	0.28	215	
713	रामदेव तिवारी	3044355	728242	67	0.38	210	
714	देखी पु कुरी	3044353	728225	67	0.23	210	
715	झुपाल कुरी	3044358	728217	68	0.36	30	
716	(सखारी)	3044366	728225	68	0.33	210	
717	राज शिलंग कुरी	3044370	728227	69	0.18	45	
718	राधा राज धावल	3044374	728216	69	0.43	210	
719	कर्ण ह. कुरी	3044373	728214	69	0.63	35	
720	सुगढे धावल	3044379	728176	69	0.28	200	
721	आमला बती धावल	3044396	728170	68	0.19	115	
722	देवराज धावल	3044389	728192	70	0.38	100	
723	सुप नाल कुरी	3044404	728206	70	0.29	180	
724	कोद्दम गाट	3044426	728192	70	0.58	215	
725	गाँगोळा गाट	3044421	728197	71	0.30	215	
726	गाँगोळा गाट मुराज	3044429	728203	72	0.45	70	
727	गाँगोळा मुराज	3044420	728218	72	0.46	70	
728	बुबाली मुराज	3044433	728222	73	0.26	200	
729	रामचल कुरी	3044409	728219	73	0.35	210	
730	रामचल कुरी	3044318	728225	74	0.14	35	
731	बुबाली मुराज	3044403	728241	75	0.41	210	
732	प्रथिप तिवारी	3044381	728277	81	0.25	75	
733	गाड़ा तिवारी	3044387	728286	82	0.31	235	
734	उड़ियात तिवारी	3044391	728289	81	0.28	240	

GPS	Name	N	E	Z	Discharge	Depth	Tide
735	झांगित तिवारी	3044377	728289	80	0.29	20	
736	खेदुला गुरुलालात	3044371	728299	80	0.43	60	
737	खाटिं घरिनात	3044363	728312	80	0.30	240	
738	कोइला तिवारी	3044383	728269	81	0.33	40	
739	झांकोल काहार	3044386	728253	81	0.22	215	
740	परवन कु त्रिपाठी	3044407	728255	81	0.21	235	
741	जांगोंगी गुराम	3044432	728237	82	0.46	6150	
742	घटि प. राहार	3044449	728245	82	0.58	50	
743	झांगिल तिवारी	3044462	728240	81	0.33	35	
744	झेलू घोली	3044460	728235	81	0.38	206	
745	झांगिल तिवारी	3044469	728246	81	0.43	35	
746	मितबुद्धिा	3044471	728246	81	0.5	35	
747	पालह केवू	3044475	728250	81	0.35	40	
748	झोह्यल केवू	3044473	728264	82	0.25	280	
749	गुकुत नाँड़े	3044474	728271	82	0.46	300	
750	श्री शाम गुरला	3044482	728269	82	0.46	35	
751	शाम नथन प. गुरी	3044487	728261	82	0.29	40	
752	नजाबुद्धि	3044498	728277	82	0.53	60	
753	कासलू	3044521	728285	82	0.58	60	
754	कालाम उद्धित	3044518	728291	82	0.38	55	
755	श्री झांगर योधारी	3044522	728310	82	0.30	60	
756	॥	3044522	728313	82	0.43	30	
757	कामठद्विल गुरलालात	3044476	728285	84	0.50	283	
758	टेल खण्डू भार	3044463	728305	84	0.18	270	
759	गोदबुर ग्रालम	3044472	728301	84	0.28	370	
760	गोंगाराम गुप्ता	3044479	728306	85	0.15	221	
761	झाबुलला नाँड़े गुरलालात	3044480	728311	85	0.58	220	
762	परवन छांडी	3044509	728319	85	0.46	230	
763	झावलम	3044492	728338	84	0.50	65	
764	झतरु झेन	3044484	728339	85	0.24	150	
765	झांगिल झेला	3044494	728346	85	0.77	67	
766	ग्रामु झालम	3044415	728355	85	0.21	35	
767	झाबुदुखेन	3044497	728347	85	0.50	185	
768	कागह्या ग्रालम	3044501	728354	85	0.63	60	

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GPS	Name	N	E	Z	Discharge	Depth	Tide
769	ब्रह्मानंद गाड़	3044509	728361	85	0.53	180	-
770	राज बिलास गाड़	3044525	728363	85	0.70	180	
772	बिपण प. गाड़	3044509	728381	85	0.50	60	
773	जंगा राम हेली	3044593	728435	85	0.63	30	
774	राम रात लांड	3044535	728455	86	0.17	40	
774	"	3044529	728454	86	0.35	170	
775	जागदिल तिवरी	3044550	728467	86	0.50	180	
776	"	3044553	728472	86	0.70	25	
777	उमरजा चौधरी	3044560	728467	86	0.35	35	
778	शिवा चौधरी	3044562	728475	87	0.50	35	
779	राधे इयाश गाड़	3044539	728488	87	0.43	150	
780	राम इवतार गाड़	3044558	728491	87	0.70	35	
781	इमरिका मलाह	3044559	728507	87	0.38	190	1
782	सुनुर मलाह	3044560	728515	87	0.77	40	9
783	राम लामा मलाह	3044540	728511	88	0.21	160	
784	सुनुर मलाह	3044528	728505	87	0.46	30	
785	शेष इविर	3044525	728499	87	0.87	35	
786	सुखराम मलाह मलाह	3044559	728535	89	0.58	25	
788	कुक्कु उषा मलाह	3044558	728541	88	0.30	180	
789	लालचन मलाह	3044563	728557	88	0.50	200	
790	कैलाश मलाह	3044545	728574	87	0.41	25	
791	सुरक्षी	3044564	728575	88	0.38	180	
792	लालहर मलाह	3044572	728585	88	0.63	35	
793	राजराम मलाह	3044565	728594	88	0.58	180	
794	राम लाल मलाह	3044554	728602	88	0.56	75	
795	गोपकर मलाह	3044555	728614	87	0.63	30	
796	विनी लाल मलाह	3044550	728604	87	0.41	180	
797	सुखराम मलाह	3044542	728587	87	0.46	180	
798	कलहार मलाह	3044574	728599	87	0.36	28	
799	वैष्णव मलाह	3044575	728602	87	0.77	225	
800	भाई केवर	3044579	728617	87	0.33	180	
800	अमिरकर 2169	3044587	728612	87	0.53	230	

GPS	Name	N	E	Z	Discharge	Depth	Total
802	દુર્ગા નાડી	3046643	725369	93	0.43	35	
803	બેંગ નાડી	3046652	725370	91	0.23	35	
804	સાંજેના નાડી	3046653	725371	90	0.18	30	
805	દલિય ગુપલમાણ	3046660	725324	89	0.51	30	
806	દલિય ગુપલમાણ	3046661	725322	91	0.25	120	
807	દંગર ડાલી	3046668	725302	87	0.24	30	
808		3046663	725308	91	0.53	35	
809	ગડ્ડ	3046664	725297	88	0.33	120	
810	દાણ પાઢા	3046681	725296	89	0.33	80	
811	દિલોકા પાઢા	3046670	725280	87	0.34	80	
812	દાણ પાઢા	3046664	725274	87	0.35	100	
813	કેતાર પાઢા	3046689	725262	87	0.26	120	
814	રાખેશ્વરા ગુપ્તા	3046689	725314	85	0.63	35	
815	ઠોડે મુખ તેલી	3046699	725300	85	0.15	190	
816	સોંગ દેસ ડા	3046656	725279	84	0.36	95	
817	દંગર ડાલી	3046655	725256	84	0.20	85	
818	દાણ રહાન	3046671	725249	85	0.18	195	
819	નડાણદિન	3046675	725228	84	0.18	85	
820	શો. ગુલેઝ	3046673	725220	84	0.22	85	
821	દાણ રહાન	3046678	725215	84	0.08	195	
822	બનાદી દોના	3046691	725249	83	0.50	60	
823	દાણ રહા ગુપ્તા	3046707	725252	83	0.29	90	
824	શો. દાણાલ	3046720	725266	83	0.46	80	
825	રાખેશ્વર ગુપ્તા	3046732	725256	82	0.16	170	
826	છોલા દોના	3046731	725269	82	0.46	80	
827	દાણ ગુપ્તા	3046751	725282	82	0.38	60	
828	દાણ ગુપ્તા	3046743	725249	82	0.28	70	
829	દાણ તેલી	3046750	725292	82	0.14	210	
830	દાણ તેલી	3046758	725252	82	0.23	180	
831	દાણ ગુપ્તા	3046739	725237	83	0.090	180	
832	દિલોક ગુપ્તા	3046742	725226	82	0.05	170	
833	દિલોક કાણા	3046748	725200	85	0.10	162	
834	દાણ ડાલા	3046744	725207	85	0.11	165	
835	દાણ ડાલા	3046741	725208	85	0.15	165	

GPS	Name	N	E	Z	Discharge	Depth	Time
836	पर्याम गुप्ता	3046734	725190	84	0.38	100	
837	दलबहल	3046734	725190	84	0.35	120	
838	आमिन पाण्डिर	3046723	725203	84	0.070	200	
839	रामेषु गुप्ता	3046725	725194	84	0.011	200	
840	राजामारा भालि आमिर	3046698	725226	84	0.28	210	
841	जो-गुरुतामिल	3046692	725233	84	0.29	60	
842	वालामुदिल	3046699	725227	84	0.5	65	
843	रमेश्वर गुप्ता	3046695	725188	85	0.63	35	
844	श्री पुजारी तेली	3046694	725169	84	0.41	55	
845	सरतोष गुप्ता	3046691	725167	84	0.96	62	
846	श्री पुजारी गुप्ता	3046687	725169	84	0.5	65	
847	रघु के गुप्ता	3046704	725147	84	0.31	60	
848	केकर तेली	3046705	725163	84	0.5	90	
849		3046683	725184	84	0.43	65	
850	जगिल आठल	3046669	725180	84	0.030	105	27/06/2021 1
851	वरेस आठल	3046655	725168	84	0.12	200	11
852	वियावती आठल	3046658	725158	85	0.14	195	
853	मुहेंद्र नारे	3046661	725153	85	0.15	200	
854	फेकु आठल	3046649	725148	85	0.0053	200	
855	श्री बिद्धेश्वरी आठला	3046627	725133	85	0.46	60	
856		3046673	725142	85	0.30	80	
857	बदाष ५- आठल	3046651	725130	85	0.20	55	
858	सोम प्रकाश आठल	3046662	725128	85	0.58	60	
859	चृब ५ आठले	3046671	725122	84	0.58	60	
860	उद्दमित आठल	3046657	725115	85	0.53	60	
861	विवर टाउन आठल	3046633	725110	85	0.5	60	
862	आमित मित्रा	3046624	725104	85	0.13	330	
863	भुलचंद मित्रा	3046607	725113	85	0.93	330	
864	विनारी २८८९	3046617	725063	84	0.87	40	
865	लंगात नारा २८८९	3046619	725050	84	0.58	390	
866	जो-वाला	3046638	725174	85	0.33	80	
867	वुलर ह. आठल	3046631	725187	85	0.13	195	
868	राकेश आठल	3046622	725183	85	0.5	330	

PS	Name	N	E	Z	Discharge Depth	Tide
869	राज डोबास गांव	3046610	725178	86	0.5	45
870	सरतोष गुप्ता	3046603	725178	86	0.63	63
871	राज कुमार चंद्रार	3046593	725172	86	0.63	60
872	पुजारी बहल	3046601	725179	86	0.36	30
873	शिव पुगान घट्टाज	3046580	725144	86	0.15	44
874	राजमार्ग छिंडा	3046546	725160	86	0.36	35
875	लालमार्ग छिंडा	3046545	725136	86	0.24	100
876	धुरामार्ग गांव	3046659	725202	88	0.19	130
877	बबल गांव	3046656	725209	88	0.33	120
878	चिठ्ठकु मांडव	3046647	725203	86	0.26	75
879	श्रेष्ठमार्ग गांव	3046634	725206	86	0.36	60
880	किपाराच मांडव	3047077	725256	87	0.17	160
881	किपाराच मांडव	3047073	725254	87	0.38	160
882	सिरकार पासी	3047073	725266	87	0.23	160
883	हरसाग लोहार	3047093	725241	87	0.24	160
884	त्रिष्णु पुर्णी	3047098	725277	87	0.14	205
885	घुघा नारायण लोहार	3047094	725289	88	0.08	170
886	झैलमु पुर्णी	3047107	725293	88	0.010	180
887	राज घुघा गांव	3047100	725303	88	0.16	160
888	राज घुघा पुर्णी	3047104	725332	88	0.63	60
889	लाल घुघा छिंडवक्का	3047117	725305	88	0.09	160
890	झोड़े छिंडवक्का	3047122	725300	88	0.07.	180
891	प्रकृताच मांडव	3047131	725299	88	0.10	160
892	राज बेबास मांडव	3047137	725295	88	0.12	160
893	सगारपी भुज-छिंडवक्का	3047132	725314	88	0.16	160
894	झोड़े मकास गांव	3047146	725266	89.	0.46	135
895	राज कुमार गांव	3047144	725257	89	0.30	136
896	राज बेबास गांव	3047175	725315	88	0.23	160
897	राज बेबास गांव	3047172	725309	89	0.29	170
898	राज किलुण साह	3047171	725307	89	0.22	50
899	राज कुलार गुप्ता	3047187	725306	88	0.24	55
900	राजेश गांव	3047195	725285	88	0.4	35

GPS	Name	N	E	Z	Discharge	Depth	Total
901	कालावती दहनी	3035531	721146	88	0.38	40	
902	दोधा चाई	3035510	721131	71	0.41	60	
903	देहाव गुपलमात	3035475	721178	71	0.46	80	
904	रामपक्ष पाढ़व	3035469	721193	71	0.63	70	
905	गडेप घाह	3035452	721130	72	0.38	45	
906	सुखनी घलाते	3035444	721128	71	0.50	60	
907	मारुत जली	3035443	721114	72	0.41	70	
908	श्रिपूर्ण एहाडी	3035434	721113	72	0.58	75	
909	इमजा झली फकीर	3035435	7221108	71	0.28	95	
910	दोध घाट गाठ	3035416	722121	71	0.25	42	
911	झगाय दुदर पाढ़व	3035413	721133	71	0.50	70	
912	उंडगमत झली	3035431	721103	71	0.29	70	
913	ज्ञोलव चाई	3035413	721097	70	0.25	110	
914	गाँव उद्धि गुपलमात	3035391	721079	70	0.30	75	
915	तबाळ झली	3035398	721072	70	0.38	70	
916	तसाहु भुसलमात	3035399	721063	71	0.31	70	
917	पत्तदुधि गुसलमात	3035385	721067	71	0.70	20	
918	झगाय सलि पाणिर	3035381	721057	71	0.46	60	
919	गडेप घाढ़व	3035391	721039	72	0.36	70	
920	गडेहु घाढ़व	3035407	721032	72	0.50	75	
921	खिट झासड	3035370	721040	73	0.25	120	
922	झगरजित घाहनी	3035357	721050	72	0.36	70	
923	झगड़ल घलाम	3035333	721048	73	0.35	125	
924	झिक घला	3035319	721057	73	0.46	60	
925	झगाल गुपलमात	3035339	721042	73	0.33	80	
926	झगाल उद्धि	3035364	721030	74	0.36	60	
927	झगवाल घाहाय	3035344	721025	74	0.36	40	
928	झाहदिन गुसलमात	3035343	721025	74	0.38	105	
929	झगवड घाढ़व	3035342	721017	75	0.17	130	
930	झगरपाम घाहनी	3035330	721027	75	0.33	120	
931	झगरपाम घाहनी	3035322	721032	75	0.33	120	
932	झाजु पाढ़व	3035327	721005	75	0.29	120	
933	झोडेहु घाहनी	3035312	721026	73	0.24	120	
934	झोडग घाग	3035302	721032	73	0.21	105	
935	झोडग मसाव खहनी	3035307	720996	75	0.21	115	
936	झोडग घाग	3035304	720987	75	0.23	110	
937	झुकेश घाहनी	3035299	720992	74	0.33	135	

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GPS	Name	N	E	Z	Discharge	Depth	Total
938	સાબુલલા ગુલલમાત	3035289	720980	75	0.31	135	
939	ગાંધિબાંદ	3035285	720967	74	0.30	180	
940	સાબુલ પાછા	3035293	720971	74	0.21	125	
941	પાંડિલ રવાત	3035284	720977	75	0.17	120	
942	તાંકાત ગુલલમાત	3035270	720977	75	0.28	120	
943	ઘાડુલ હિયા	3035273	720954	75	0.21	120	
944	ચાહુલ હિયા	3035279	720936	74	0.15	130	
945	ગો. નસિબ રવાત	3035267	720932	74	0.31	125	
946	નિયાફ ઝાલી	3035234	720950	74	0.31	115	
947	અનવર ઝાલી	3035227	720956	74	0.30	115	
948	ગુજાલ અનલાઈ	3035223	720965	74	0.30	115	
949	બેદમત ઝાલી	3035217	720971	74	0.38	115	
950	ફાંડિલ ઝોલાણા	3035213	720979	74	0.25	160	
951	બાંધુલલા ગુલલમાત	3035245	720916	75	0.30	115	
952	ઝોદાદ ઝાલી	3035248	720906	76	0.13	150	
953	સાલમાત	3035230	720911	81	0.16	150	
954	ઝોદાદ	3035241	720906	82	0.15	150	
955	ઘાણાબુદ્ધિન	3035242	720897	82	0.26	115	
956	ઝોડાદ ઝાલી	3035270	720865	83	0.23	225	
957	ઝોડાદ ઝાલી	3035272	720852	83	0.24	120	
958	સાકાર ઝાલી ઝાનાટી	3035283	720869	83	0.15	130	
959	અકદુલ ઝાલી	3035277	720875	83	0.10	130	
960	ઝરફાત ઝાલી	3035270	720890	83	0.14	100	
961	દંગષ્ટ ઝાલી	3035318	720906	82	0.035	200	
962	ઝોદાદ ઝાર	3035319	720893	81	0.38	70	
963	ઝોદાદ ઝાર	3035320	720896	82	0.38	70	
964	તાજિતઝલા	3035330	720898	82	0.26	75	
965	"	3035331	720899	82	0.39	45	
966	કલામુદ્દિન	3035317	720884	82	0.29	45	
967	ડોનાફલા	3035319	720886	81	0.29	40	
968	મહાજેદ	3035324	720883	81	0.17	45	
969	આખા વાલુન	3035320	720873	879	0.26	70	
970	ઝાબુલા કાદિર	3035321	720872	79	0.77	70	
971	"	3035322	720869	79	0.30	130	
972	નયાફુદ્દિન	3035322	720857	78	0.29	60	

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GPS	Name	N	E	Z	Discharge	Depth	Tole
973	बैंग जला	30353363	720858	77	0.28	100	
974	समर्थन 31846	3035334	720813	76	0.36	80	
975	पाबुल रोहिंद	3035307	720880	76	0.29	55	
976	पाबुल रोहिंद	3035300	720885	76	0.43	60	
977	एमसु महा	3035300	720885	76	0.31	90	
978	गोछगढ़ पुसुक	3035295	720884	75	0.21	140	
979	वरेगुडिन मुसलमान	3035302	720853	74	0.25	80	
980	गोछगढ़ इवरिस	3035252	720852	75	0.17	120	
981	गोछगढ़ इवरिस	3035245	720857	75	0.18	120	
982	गोछगढ़ डालमा	3035243	720840	75	0.20	80	
983	रामलाद मुसलमान	3035235	720825	75	0.33	80	
984	वोसरखिन मुसलमान	3035224	720832	75	0.38	80	
985	माकुद सालमा	3035224	720818	75	0.30	45	
986	हजारी प्रसाद विक्की	3035238	720805	74	0.21	120	
987	गोछगढ़ डाली	3035250	720813	74	0.20	120	
988	बड़ा गोछगढ़	3035252	720811	74	0.05	120	
989	तहाद डाली	3035253	720805	73	0.77	80	
990	हजार डल्ला	3035245	720806	74	0.21	120	
991	राधी गाढ़	3035221	720791	74	0.26	150	
992	हजारी गाढ़	3035221	720777	74	0.30	75	
993	राम खिलास गाढ़	3035201	720756	73	0.46	30	
994	टुलसीराम गाढ़	3035192	720793	73	0.14	130	
995	एहुद डाली	3035191	720738	74	0.35	80	
996	उपार फुला	3035203	720822	73	0.25	80	
997	उपिज ५७८	3035217	720822	74	0.22	75	
998	मोहमद फजार	3035211	720839	74	0.30	75	
999	मोहमद २८८	3035194	720845	74	0.26	75	
1000	व्यापुडिन मुप्पलमान	3035191	720856	73	0.35	80	

GPS	Name	N	E	Z	Discharge	Depth	Total
1001	अमिरका लोट	3035563	723718	438	0.32	45	
1002	उन्निता लोट	3035556	723717	41	0.33	45	
1003	सालिशा कलांत	3035543	723715	43	0.41	40	
1004	सिन्धु जगहवाल	3035531	723719	44	0.31	40	
1005	दिपक याटे	3035535	723737	473	0.22	40	
1006	ग्रन कैचल मलांत	3035503	723720	73	0.10	430	
1007	संकुञ्जा मलांत	3035489	723722	73	0.31	50	
1008	शेल कुमारी कातर	3035519	723686	73	0.28	55	
1009	बिंदी लोट	3035477	723722	72	0.29	55	
1010	पार्कली लोट	3035485	723746	73	0.50	50	
1011	पर्वत 2169	3035457	723751	72	0.35	150	
1012	नदेलाल लोट	3035472	723769	73	0.20	43	
1013	दर्दि लोट	3035466	723784	72	0.22	45	
1014	लोटपट लोट	3035454	723773	73	0.15	45	
1015	राज लोट	3035450	723775	72	0.33	30	
1016	राजकुमार लोट	3035445	723778	72	0.35	45	
1017	रातेष्ठा लोट	3035444	723783	72	0.41	40	
1018	शिव कुमार लोट	3035439	723777	72	0.29	125	
1019	शलभता लोट	3035437	723788	72	0.21	135	
1020	शलडु लोट	3035437	723798	72	0.35	100	
1021	शंकर काणां	3035446	723803	72	0.31	105	
1022	शलडु लोट	3035450	723816	73	0.30	35	
1023	पाराग लोट	3035454	723816	73	0.25	190	
1024	विश्वामित्र लोट	3035450	723824	73	0.28	125	
1025	विद्यु बाणार	3035442	723838	73	0.50	150	
1026	पंचम बाणार	3035428	723839	74	0.42	30	
1027	देवा लोट	3035421	723867	74	0.31	30	
1028	लेहुना लोट	3035422	723869	74	0.36	30	
1029	लालगण लोट	3035426	723876	74	0.31	40	
1030	झोलुडु लोट	3035415	723873	74	0.26	40	
1031	इत्येष्वामि लोट	3035434	723873	74	0.20	40	
1032	विद्वा कुमार लोट	3035434	723869	74	0.19	40	
1033	वरालत	3035445	723887	75	0.21	60	

GPS	Name	N	E	Z	Discharge	Depth	Tide
1034	तोलन लोड	3035450	723899	75	0.20	45	
1035	शारदा लोड	3035491	723901	75	0.50	30	
1036	धुकाना चार्ड	3035473	723891	76	0.16	40	
1037	दर्शन लोड	3035491	723887	76	0.28	150	
1038	राज गोहित लोड	3035503	723884	75	0.35	40	
1039	पाठे लोड	3035506	723886	76	0.32	40	
1040	पलट चार्ड	3035519	723886	76	0.31	40	
1041	सिंधगाव लोड	3035507	723918	75	0.10	35	
1042	राज कुमार लोड	3035498	723917	76	0.29	45	
1043	झाँग चार्ड	3035444	723915	77	0.20	40	
1044	देशा चार्ड	3035477	723935	76	0.30	45	
1045	राज चार्ड	3035476	723940	76	0.25	45	
1046	गुरु चार्ड	3035481	723941	77	0.31	45	
1047	मिष्य चार्ड	3035478	723950	76	0.36	55	
1048	राधेशमान चार्ड	3035477	723954	76	0.33	35	
1049	धनशमान लोड	3035474	723979	76	0.36	40	
1050	धनशमान लोड	3035467	7223900	77	0.38	40	
1051	राज देवभाल कुमाल	3035475	724011	77	0.53	46	
1052	खेलाल चार्ड	3035472	724029	77	0.21	40	
1053	दुर्विजय पाठे	3035473	723878	79	0.25	40	
1054	धृष्णुनंद लोड	3035494	723863	79	0.27	40	
1055	विनय स	3035486	723872	79	0.25	40	
1056	पुरेका लोड	3035479	723856	79	0.21	45	
1057	मुरेश लोड	3035482	723848	79	0.21	45	
1058	नेशनल २१६७	3035456	723864	79	0.31	210	
1059	पुरवापी २१६७	3035457	723845	79	0.22	150	
1060	राम यादव	3035430	723806	79	0.36	40	
1061	हराम अग्री वराह	3035430	723810	79	0.15	**	
1062	तारा देवि लोड	3035413	723808	79	0.29	200	
1063	कियान लोड	3035411	723800	79	0.28	200	
1064	दिनेश लोड	3035418	723793	79	0.29	35	
1065	विष्णु लोड	3035422	723784	78	0.31	20	
1100	श्रीराम कालार	3035581	723875	79	0.34	50	

GPS	Name	N	E	Z	Discharge	Depth	Tide
1066	भुवाल लोड	3035423	723772	78	0.31	45	
1067	राहिका मली	3035410	723833	79	0.24	60	
1068	सद्यानी सद्यानी	3035396	723844	78	0.21	45	
1069	चंगटजिटहरही	3035395	723859	78	0.36	40	
1070	शमजित लोड	3035900	723869	78	0.25	30	
1071	किंजुष्मादूर शमानी	3035384	723866	78	0.46	75	
1072	द्याम चार्ट	3035382	723871	78	0.38	40	
1073	ओमर चार्ट	3035385	723876	77	0.06	40	
1074	सलि लोड	3035393	723884	78	0.30	40	
1075	ताँलन लोड	3035380	723884	78	0.41	47	
1076	राज ज्ञाते चोबी	3035352	723879	78	0.30	50	
1077	फुला लोड	3035417	723904	77	0.35	330	1-2
1078	गलद लोड	3035371	723918	78	0.38	110	
1079	प्रेस्ट एजिक चोही	3035360	723907	78	0.31	40	
1080	प्रशु लोड	3035368	723927	78	0.35	45	
1081	सितधाल शमार	3035362	723928	78	0.29	45	
1082	पुष्प बकुन निया	3035357	723921	78	0.46	100	
1083	रजिट चोबी	3035349	723916	78	0.35	65	
1084	अललाम गद्धुर	3035329	723924	78	0.36	90	
1085	धमाता शहनी	3035331	723941	78	0.50	100	
1086	प्रस्तोड लिंगवर्णी	3035334	723950	78	0.46	100	
1087	बिठोड लिंगवर्णी	3035347	723957	78	0.45	100	
1088	ताँलत शहनी	3035345	723963	77	0.26	90	
1089	बिठोड लिंगवर्णी	3035361	723962	77	0.38	100	
1090	मुनली चुमिया	3035324	723952	78	0.35	30	
1091	शुनीहती याह	3035323	723960	78	0.25	40	
1092	फुला चार्ट	3035319	723970	78	0.63	30	
1093	ट्राइल चोबी	3035317	723978	78	0.58	30	
1094	प्रस्त गुप्ता	3035313	723978	78	0.25	126	
1095	पलटत नार्ड	3035308	723985	79	0.35	45	
1096	सरवुला चोबी	3035318	723987	79	0.36	40	
1097	विपाहि चुमिया	3035314	723997	78	0.23	65	
1098	पुतुना चुरिहा	3035310	723997	78	0.21	110	
1099	सरकारी	3035328	723888	79	0.77		

GPS	Name	IY	E	Z	Discharge	Depth
1101	संकाहुलि गुप्तमाता	3044673	726090	88	0.24	150
1102	बद्धी माली	3044666	726096	88	0.28	190
1103	राज बहून माली	3044659	726098	88	0.43	170
1104	सर्वज्ञ माली	3044653	726096	88	0.20	100
1105	देवद्यु माली	3044667	726106	88	0.35	80
1106	गोपालकृष्ण	3044715	726106	87	0.35	80
1107	गोपालकृष्ण	3044716	726134	87	0.45	80
1108	गोपालकृष्ण	3044726	726138	86	0.46	80
1109	गोपाल माली	3044753	726103	85	0.30	80
1110	गोपाल माली	3044742	726101	85	0.50	60
1111	दाविदा खातुवा	3044767	726110	85	0.46	85
1112	विक्रूत आच्छ	3044786	726127	85	0.63	60
1113	चैत्राज्ञ गुप्ता	3044782	726152	85	0.21	120
1114	संकल गुप्ता	3044786	726196	85	0.38	85
1115	बुधिमान गुप्ता	3044769	726240	85	0.40	100
1116	पाठ्य माली	3044765	726241	85	0.41	100
1117	लौटन माली	3044755	726264	86	0.53	865
1118	गिलन गुप्ता	3044795	726254	89	0.31	80
1119	लोहरत विक्रमी	3044785	726270	90	0.19	150
1120	राम लक्ष्मणगिलन गुप्ता	3044778	726283	90	0.25	115
1121	संकल गुप्ता	3044776	726285	90	0.20	215
1122	राजाराम गुरुन	3044755	726286	90	0.08	24
1123	विष्णु हरिनाथ	3044754	726295	90	0.23	135
1124	सदतराम हरिनाथ	3044744	726289	89	0.31	80
1125	गोपन हरिनाथ	3044739	726291	89	0.24	125

GPS	Name	N	E	Z	Discharge	Depth
1126	शिवर मुजा	30447122	726283	89	0.26	125
1127	प्रभेश्वर मुजा	3044721	726285	88	0.21	120
1128	सुपमुता गामवाले	3044712	726281	89	0.23	230
1129	गदधाम राम	3044711	726298	89	0.16	200
1130	राम मिलन हरिजान	3044709	726304	90	0.25	95
1131	इगांड मिलन हरिजान	3044703	726313	90	0.31	95
1132	बलधाम हरिजान	3044703	726323	91	0.33	95
1133	सुधधाम हरिजान	3044702	726327	91	0.21	90
1134	पुष्पिंग हरिजान	3044698	726336	91	0.21	205
1135	राम बहुद बाहाला	3044686	726335	91	0.11	80
1136	प्रियंका हरिजान	3044682	726347	91	0.14	150
1137	चंद्रेश हरिजान	3044667	726339	91	0.21	120
1138	सुनिता गुप्ता	3044656	726343	90	0.70	85
1139	पुरेश हरिजान	3044683	726328	91	0.80	90
1140	व्योमेश हरिजान	3044676	726320	91	0.43	90
1141	जामनति हरिजान	3044678	726314	91	0.23	95
1142	कुलकी हरिजान	3044671	726312	91	0.30	95
1143	राम पूर्ण हरिजान	3044670	726317	91	0.12	120
1144	राम लाल हरिजान	3044663	726311	91	0.33	90
1145	लाल बहादुर हरिजान	3044684	726315	91	0.25	295
1146	जगीला हरिजान	3044668	726303	91	0.46	890
1147	राम मिलन हरिजान	3044683	726302	90	0.29	85
1148	.	3044682	726295	90	0.31	85
1149	नानामति रवातुन	3044691	726390	90	0.23	95
1150	संयोग गुप्तवाल	3044703	726395	89	0.21	186

GPS	Name	N	E	Z	Discharge	Depth
1151	प्रेषताना रवात	3044716	726360	89	0.15	130
1152	ठाड्हि रवात	3044721	726374	87	0.18	180
1153	रातुलाअडित	3044713	726388	87	0.50	220
1154	ठाबदुल राहिम	3044719	726402	88	0.18	230
1155	भाटर प. राय्यरी	3044696	726408	87	0.23	192
1156	गाजेश ठोंडी	3044693	726422	86	0.22	230
1157	उद्दिपाना राहमान	3044743	726416	87	0.10	120
1158	बिंदि राहमान	3044715	726432	86	0.25	150
1159	सोमाधारे बनिया	3044709	726401	86	0.30	60
1160	ठाबदुल उमिया	3044769	726404	85	0.17	100
1161	ठाबदुल खलान	3044768	726419	85	0.22	140
1162	ठाबदुल रहिम	3044763	726426	84	0.20	240
1163	गोपाठ बनिया	3044762	726428	83	0.43	80
1164	रामलाल काहा	3044792	726426	84	0.17	190
1165	उगसान राली	3044794	726411	84	0.25	150
1166	उपीक राहमान रवात	3044819	726403	84	0.23	150
1167	ठासारे बनिया	3044831	726408	83	0.17	225
1168	रामबिंद्रोर बनिया	3044843	726410	83	0.38	85
1169	चिंतारामगण साहस	3044845	726417	82	0.08	200
1170	बाल किस्तुर बनिया	3044851	726419	82	0.23	170
1171	ठाबदुल लाल	3044861	726422	82	0.20	205
1172	ठाबदुल ढाक	3044866	726409	82	0.46	100
1173	उरुजाल रवात	3044870	726407	82	0.27	280
1174	सोम प्रसाद बनिया	3044856	726453	82	0.11	180
1175	बिंदोर जोधार	3044852	726457	82	0.38	200

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GPS	Name	N	E	Z	Discharge	Depth
1176	राहुला मुखलमान	3044847	726460	81	0.50	80
1177	सत्यिम रवान	3044838	726455	81	0.21	185
1178	रावदुल डोहिय	3044832	726464	80	0.53	80
1179	राधीक गोवारु	3044884	726435	79	0.26	185
1180	राधीक उल्ला	3044890	726436	79	0.31	175
1181	रंगि उल्ला	3044891	726437	78	0.29	150
1182	रोहन भयुरु	3044893	726437	78	0.15	240
1183	रुद्रबिज	3044924	726443	78	0.29	120
1184	रघिम इलाम	3044808	726385	78	0.22	210
1185	रालिम उल्ला	3044836	726388	89	0.21	90
1186	रोहन उल्लाम	3044855	726397	89	0.28	75
1187	कलाम उदित	3044859	726401	89	0.25	80
1188	रोहन याकु	3044845	726392	89	0.31	90
1189	रोखन प. लेली	3044804	726374	88	0.20	240
1190	कृष्ण गोहन गुप्ता	3044791	726357	88	0.18	240
1191	कृष्ण गोहन गुप्ता	3044797	726361	88	0.87	35
1192	स्वेच्छा मुखलमान	3044772	726350	88	0.24	195
1193	राम याम कालावर	3044762	726334	88	0.35	100
1194	लोल गोहन लोहे	3044766	726334	87	0.12	35
1195	लाल गोहन लोहे	3044747	726334	87	0.28	110
1196	चौतराम गुप्ता	3044764	726321	86	0.20	200
1197	राम शिलत रामसराम	3044767	726321	85	0.21	80
1198	अ. गुरुगेल गुप्ता	3044766	726312	85	0.38	240
1199	राजमन गुप्ता	3044766	726303	85	0.25	110
1200	श्रीकृष्ण केलवार	3044799	726250	90	0.35	140

GPS	Name	N	E	Z	Discharge	Depth
1202	श्री दुर्गा मंदिर	3045353	721472	65	0.26	80
1203	मनान द्वारी	3045372	721432	67	0.18	86
1204	किंचित्करवोती	3045379	721433	67	0.25	80
1205	रालडूल मंजिज	3045394	721435	69	0.38	20
1206	पलडूल अलान	3045402	721437	69	0.20	75
1207	प्रदावकुमार पाटी	3045407	721436	70	0.18	120
1208	छोटा जारी	3045426	721436	70	0.53	28
1209	सुना उमा	3045408	721445	71	0.36	20
1210	वायोप्राप्त बरी	3045406	721452	72	0.36	20
1211	अलान उद्धिन मुखलगार	3045350	721430	71	0.25	80
1212	आबडूल महान	3045349	721426	71	0.15	80
1213	आबडूल बाईक	3045345	721420	72	0.28	80
1214	इनारुला	3045351	721415	72	0.31	80
1215	मुस्तफा मुखलगार	3045341	721401	71	0.23	80
1216	मुस्तफा मुखलगार	3045336	721397	72	0.24	80
1217	गुरु चिष्ठार कोल	3045324	721386	70	0.18	80
1218	रघुलक्षण कोल	3045327	721373	71	0.18	80
1219	आबडूल अलान	3045322	721357	71	0.31	82
1220	मुकतार उमा	3045309	721333	72	0.46	20
1221	समलुक्लि मुखलगार	3045312	721335	72	0.29	80
1222	आबडूल अहिन	3045311	721330	72	0.43	15
1223	गामेद मुखलगार	3045209	721342	72	0.29	80
1224	मांगा बुमार भुजा	3045308	721318	73	0.28	80
1225	सिंह गांधी	3045261	721221	73	0.43	15
1226	राम प. गुरता	3045093	721250	74	0.05	115

२०८१ डिस्ट्री - ११

परिणाम

Date _____

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GPS	Name	N	E	Z	Discharge	Depth
1227	गुप्तलिला	3045092	721258	75	0.12	200
1228	इनाइज़नेट	3045090	721262	75	0.70	20
1229	लकड़ी तेली	3045082	721262	76	0.22	210
1230	संस्कार तेली	3045083	721273	76	0.18	200
1231	लोला गुप्तलाजात	3045081	721293	76	0.19	210
1232	उमेश इलेन	3045071	721280	77	0.28	215
1233	मोहन इलेन	3045067	721285	77	0.02	215
1234	प्रदीप गुप्ता	3045059	721286	77	0.16	200
1235	प्रदीप गुप्ता	3045055	721282	78	0.01	200
1236	कलापुरुष गुप्तलाजात	3045035	721282	78	0.13	60
1237	लडापुरुष गुप्तलाजात	3045052	721305	78	0.25	35
1238	वरदीप गुप्तलाजात	3045041	721303	79	0.24	85
1239	रोलादुलिला	3045037	721308	79	0.02	35
1240	जाह्नवी गांधी	3045043	721310	79	0.04	215
1241	वेस मोहन	3045019	721307	80	0.15	215
1242	इलेन आली	3045031	721302	80	0.03	160
1243	गुप्तलाकीर्ति दर्शी	3045003	721291	81	0.23	30
1244	प्रभुत आर	3045002	721280	81	0.24	30
1245	जावहुला दर्शी	3045004	721281	76	0.19	30
1246	प्रभुत आर	3045015	721275	86	0.05	200
1247	एफ उल्ला	3045010	721266	90	0.03	200
1248	मोहन सर्वे	3045018	721259	90	0.07	215
1249	उल्ला उल्ला	3045015	721243	91	0.31	80
1250	विष्वान गुप्तलाजात	3045006	721239	90	0.09	200
1251	सचिन गुप्तलाजात	3044991	721238	90	0.10	105

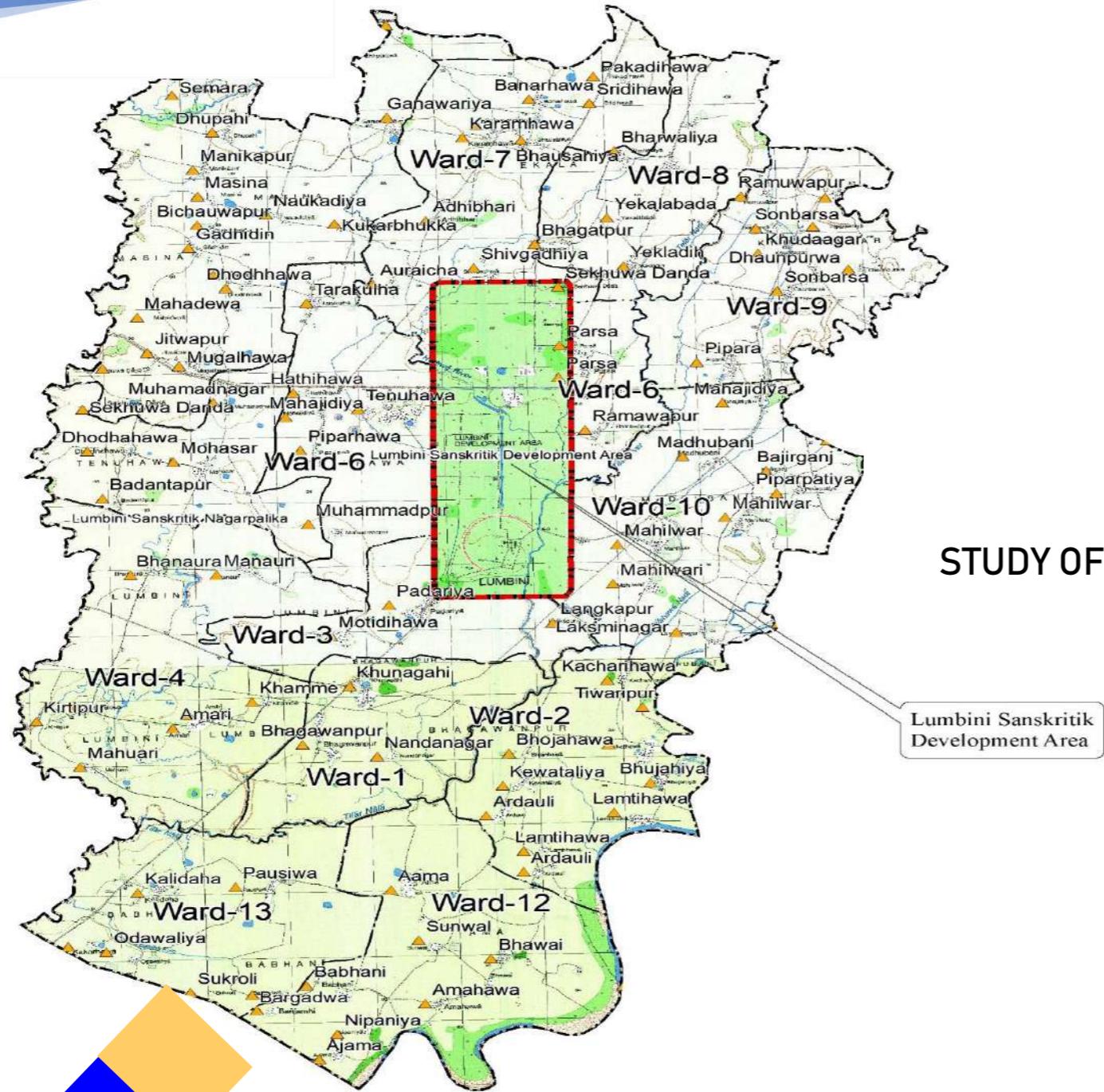
GPS	Name	N	E	Z	Discharge	Date
1252	रहम उल्लामा गुलामात	30449982	721222	91	0.02	200
1253	राबड़ल खलाम	30449966	721215	91	0.02	170
1254	वलाम शंकिन गाढ़ी	30449962	721238	90	0.02	200
1255	गुपतिया घोबी	30449949	721246	90	0.02	200
1256	राबड़ल खलाम	30449940	721254	89	0.25	110
1257	पंगला पाट	30449939	721270	88	0.26	80
1258	पिटु काहार	3044934	721268	88	0.24	80
1259	शित भरण जुर्मी	3044940	721230	88	0.04	150
1260	झातू कुर्मी	3044938	721229	92	0.60	20
1261	राडेन फै. जुर्मी	3044930	721220	91	0.23	160
1262	राबू हर्षाम	3044933	721227	91	0.35	140
1263	वायासेन गाढ़ी	3044922	721229	91	0.43	125
1264	सरीखालन गाढ़ी	3044915	721240	91	0.18	125
1265	मनसाम गुलामात	3044967	721258	91	0.30	140
1266	मनसाम गुलामात	3044969	721263	91	0.08	250
1267	झाकरा गाढ़ी	3044969	721265	90	0.15	150
1268	महलिल गाढ़ी	3044968	721275	90	0.03	220
1269	चिनोदा गाढ़ी	3044972	721279	90	0.06	180
1270	राबड़ल रोव शोक	3044962	721281	90	0.17	180
1271	राबू लाहार गाढ़ी	3044969	721289	89	0.05	150
1272	राबड़ल मरान गाढ़ी	3044967	721298	88	0.02	145
1273	राम लाल पाट	30449916	721307	88	0.03	140
1274	रालिङ गाढ़ी	30445032	721331	88	0.03	20
1275	रालिङ गाढ़ी	30445035	721331	88	0.03	20
1276	राम गुलामात	30445039	721347	88	0.03	20

GPS	Name	N	E	Z	Discharge	Date
1277	ग्रामदूर झाली	3045030	721364	88	0.43	20
1278	झालूला वडा	3045024	721379	88	0.46	18
1279	झुंगुस गुप्तलालान	3045015	721390	88	0.33	20
1280	झाबदूला गोपार	3045015	721408	89	0.20	120
1281	झाबदूला गोपार	3045020	721405	90	0.53	120
1282	झाबदूला गोपार	3045023	721403	89	0.29	105 100
1283	झानि उल्ला शेळ	3045014	721415	89	0.35	20
1284	खिरेदू कोहार	3045009	721430	89	0.38	85
1285.	जागा प. कोहार	3045002	721449	89	0.38	85
1286	कालिंग उल्ला	3044993	721468	89	0.33	80
1287	धनश्याम याढव	3044990	721471	88	0.70	20
1288	त्रिवेणी कोहार	3044988	721494	88	0.43	20
1289	ओगवती तेली	3044986	721502	88	0.44	20
1290	ओगवती तेली	3044988	721505	89	0.26	80
1291	नालिंग गुप्तलालान	3044979	721503	88		
1292	गुड्डे गुप्तलालान	3044978	721509	88	0.70	20
1293	नालिंग गढ़ी	3044983	721517	88	0.43	20
1294	नालिंग गढ़ी	3044989	721525	88	0.33	18
1295	शिंत कुमार गुप्ता	3045002	721526	88	0.58	20
1296	लाहमी गुप्ता	3045000	721526	88	0.50	20
1297	दिनेश गुप्ता	3045002	721531	87	0.29	20
1298	खिंसोड कुमार याढव	3045010	721540	87	0.36	20
1299	खिंसोड कुमार याढव	3045007	721538	87	0.58	20
1300	टुलसी याढव	3045005	721518	87	0.58	20



OFFICE OF MUNICIPAL EXECUTIVE
LUMBINI SANSKRITIK MUNICIPALITY
LUMBINI PROVINCE, NEPAL

VOLUME II
FINAL DRAWING



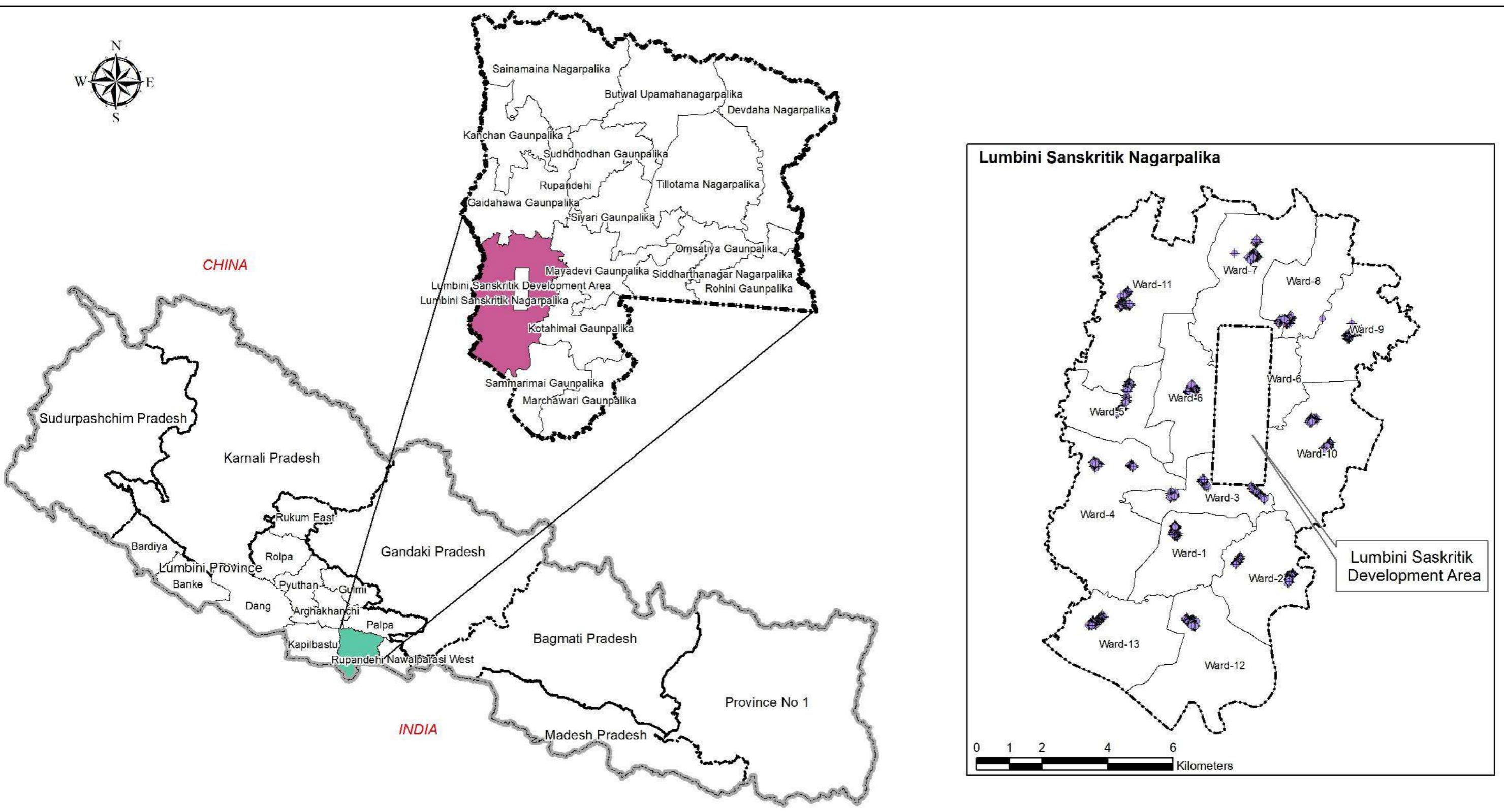
FINAL REPORT

STUDY OF GROUNDWATER STATUS OF LUMBINI SANSKRITIK MUNICIPALITY

Lumbini Sanskritik
Development Area

SUBMITTED BY:

TOPCON ENGINEERING CONSULTANCY PVT. LTD
BUDDHANAGAR, KATHMANDU

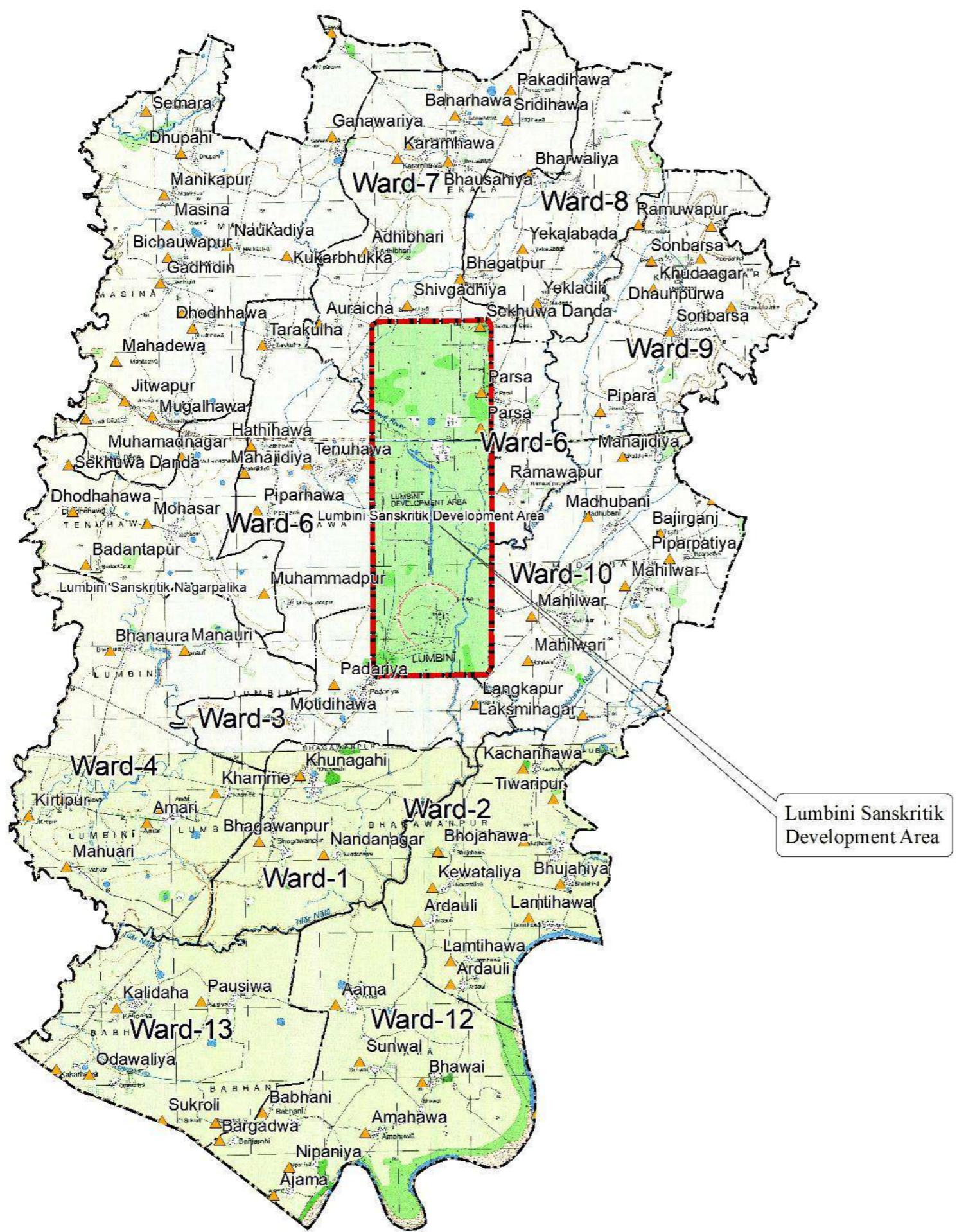


Source: Survey Department Topographic Map, MoFAGA GIS baseline data.

Index Map Study of Groundwater Status of Lumbini saskritik Municipality Lumbini Sanskritik Municipality	Submitted to:  Lumbini Sanskritik Municipality Office of Municipal Executive Rupandehi, Nepal	Submitted by: Topcon Engineering Consultanc Pvt. Ltd Buddhanagar, Kathmandu	Map No: M-1 Sheet No: 01
Coordinate System: MUTM 84 Projection: Transverse Mercator Datum: Nepal Nagarkot False Easting: 500,000.0000 False Northing: 0.0000 Central Meridian: 84.0000 Scale Factor: 0.9996 Latitude Of Origin: 0.0000 Units: Meter			

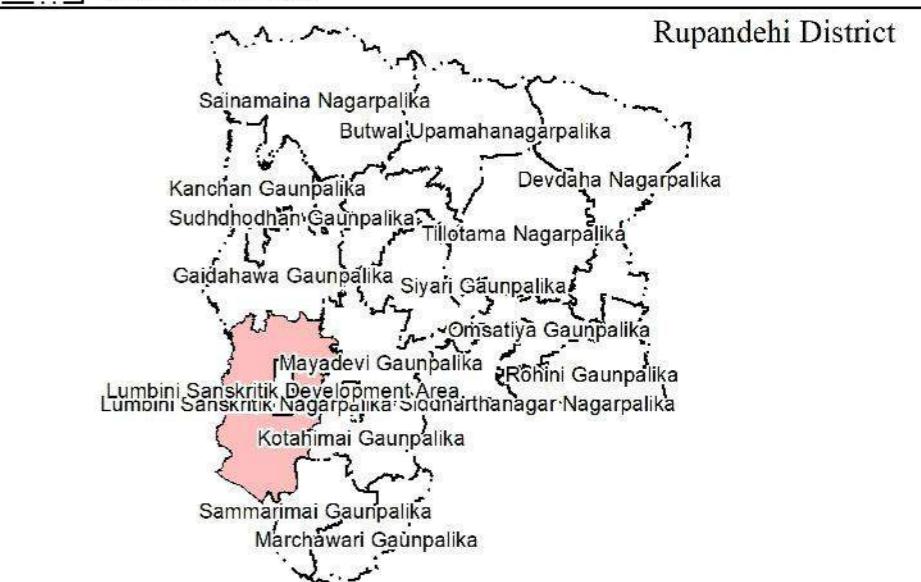
TOPOGRAPHICAL MAP OF

LUMBINI SANSKRITIK NAGARPALIKA



Legend

- ▲ Village
- Lumbini Sanskritik Development Area
- Lumbini Sanskritik Nagarpalika
- Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

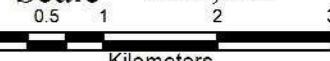
Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:66,359



Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

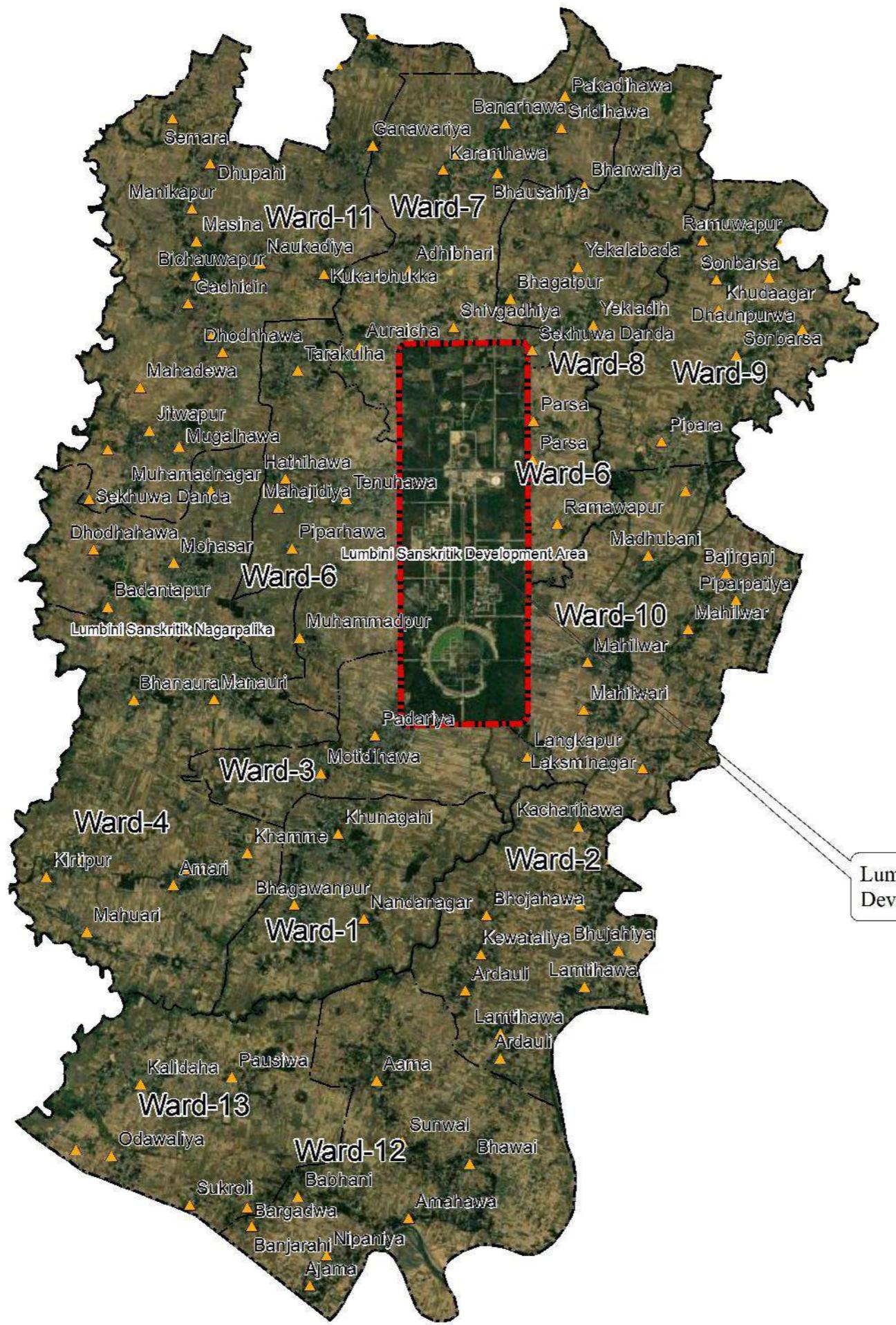
Date :

MAP NO :
M-6

SHEET NO :
2

SATELLITE MAP OF

LUMBINI SANSKRITIK NAGARPALIKA



Legend

- ▲ Village
- Lumbini Sanskritik Development Area
- Lumbini Sanskritik Nagarpalika
- Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:66,359

0 0.5 1 2 3

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

MAP NO :
M-6

SHEET NO :
1

**TOPOGRAPHICAL MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

- Groundwater
 - ▲ Village
 - Lumbini Sanskritik Development Area
 - Lumbini Sanskritik Nagarpalika
 - Ward Boundary

Rupandehi District

Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

**Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu**

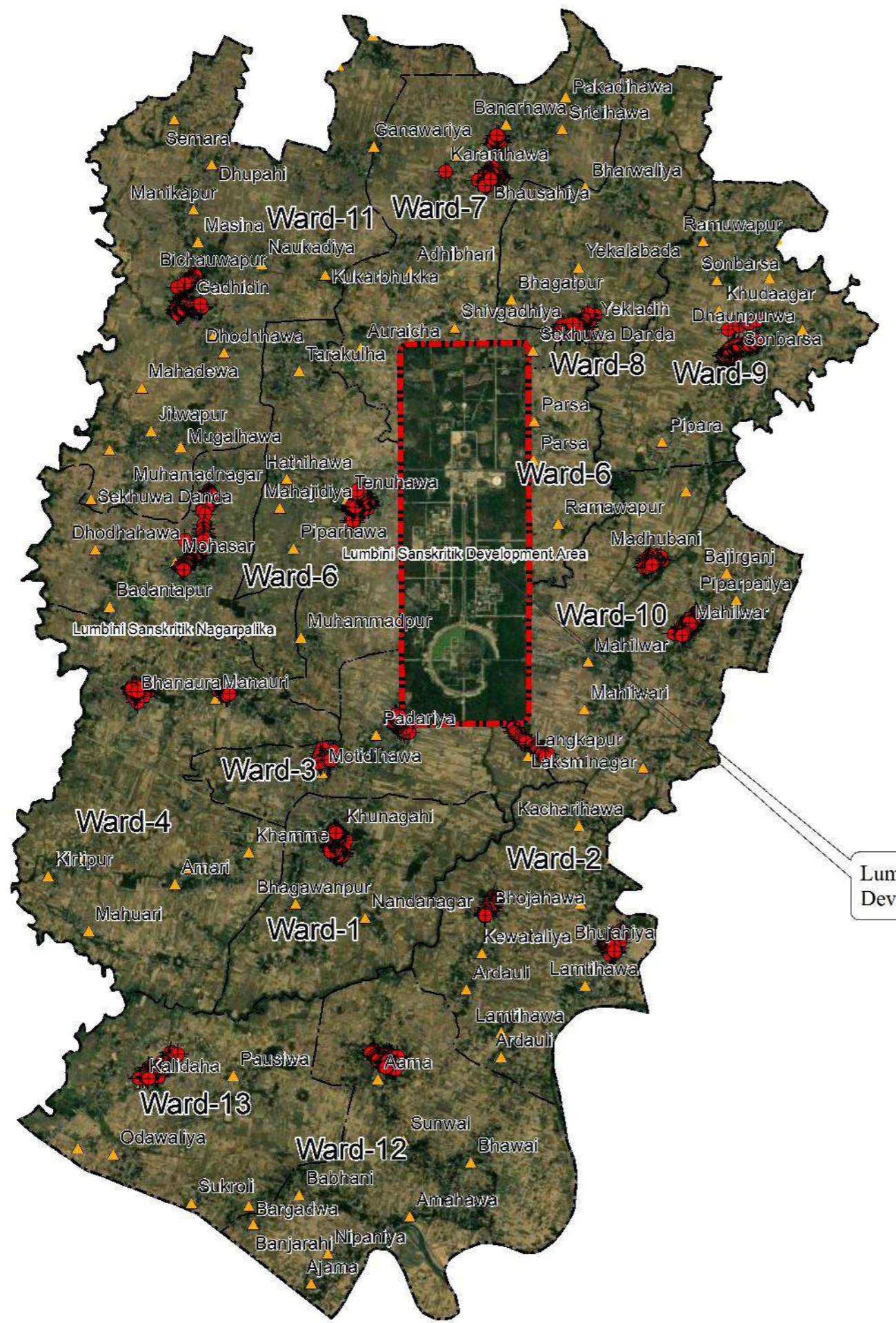
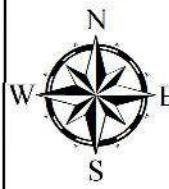
Data Source :
Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:66,359
0.5 1 2 Kilometers

Coordinate System: Modified UTM 84
Projection: Transverse Mercator
Datum: Everest 1830
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False Northing: 0.0000
Central Meridian: 84.0000
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Units: Meter

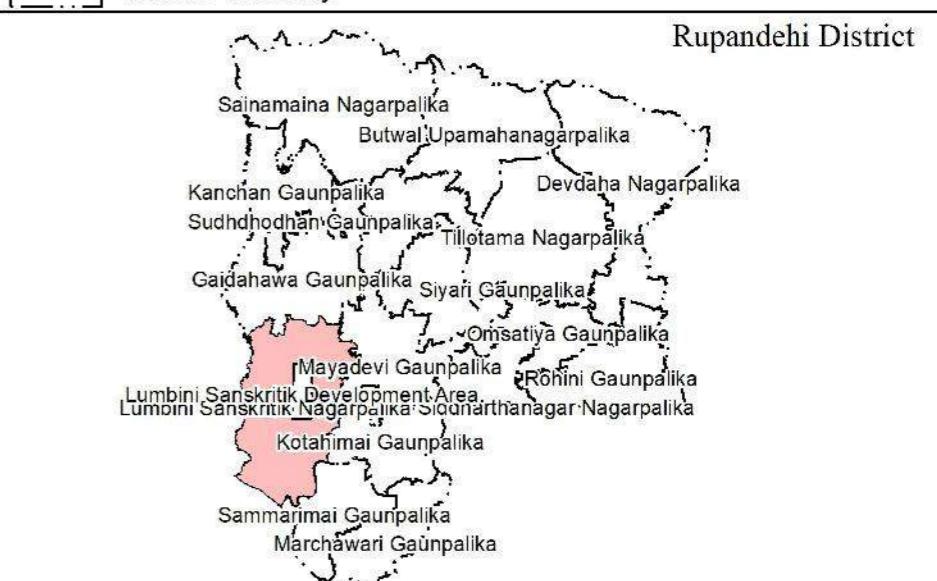
MAP NO :	SHEET NO:
M-2	14

**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

- Groundwater
- ▲ Village
- Lumbini Sanskritik Development Area
- Lumbini Sanskritik Nagarpalika
- Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:
Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

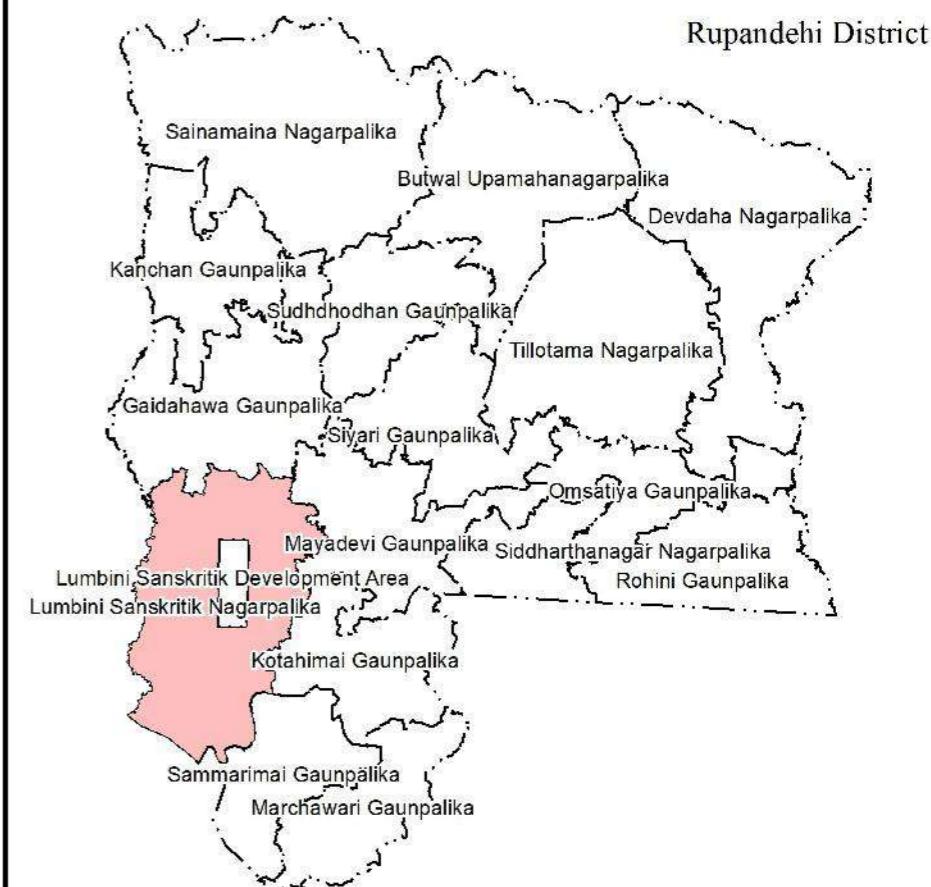
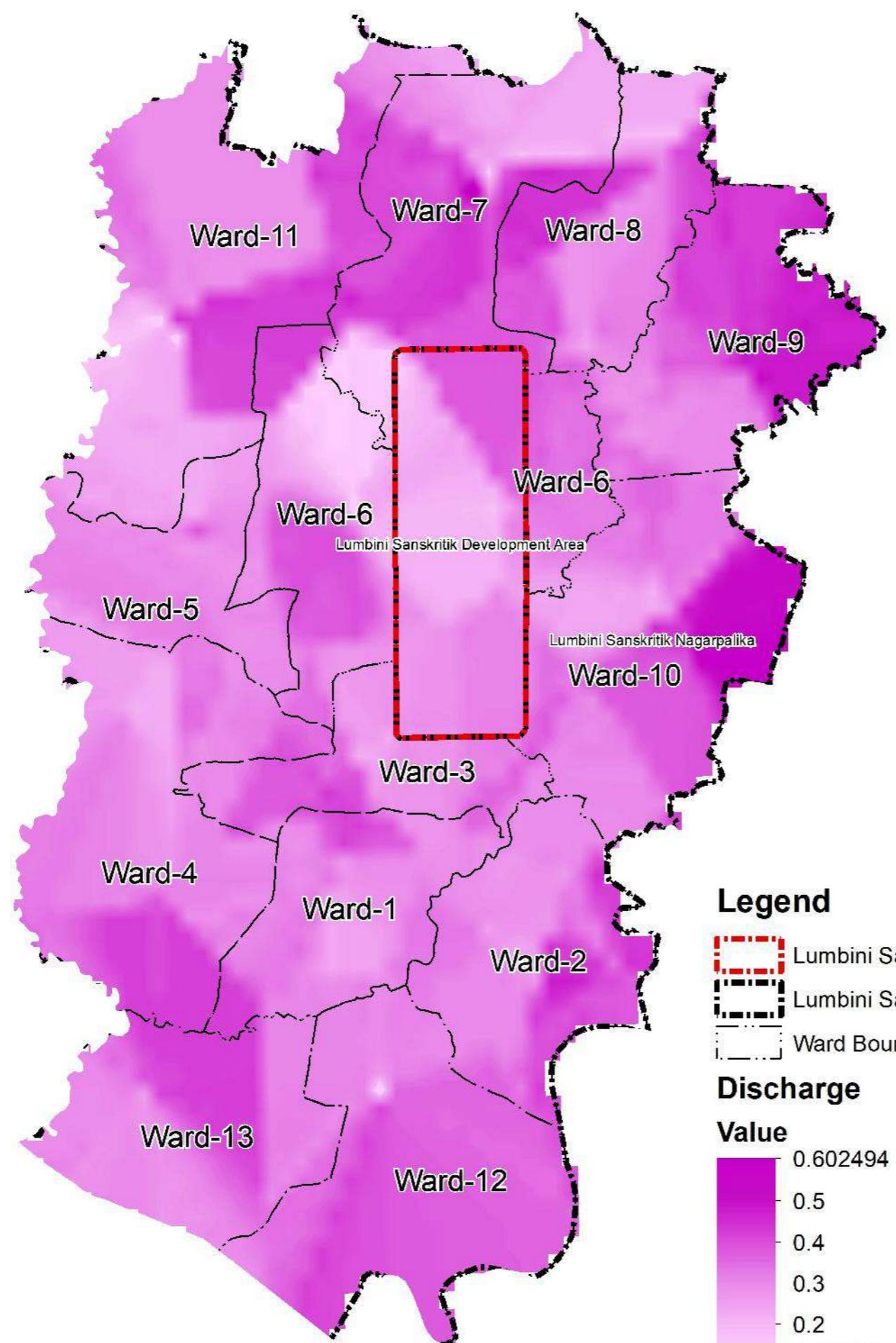
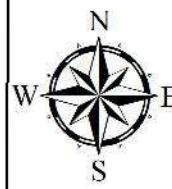
Scale 1:66,359
0 0.5 1 2 3
Kilometers

Coordinate System: Modified UTM 84
Projection: Transverse Mercator
Datum: Everest 1830
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9996
Latitude Of Origin: 0.0000
Units: Meter

Date :

MAP NO: M-3 SHEET NO: 14

**THEMATIC MAP OF
BASED ON DISCHARGE
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

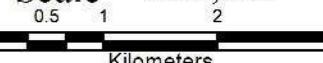
Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:66,359



Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

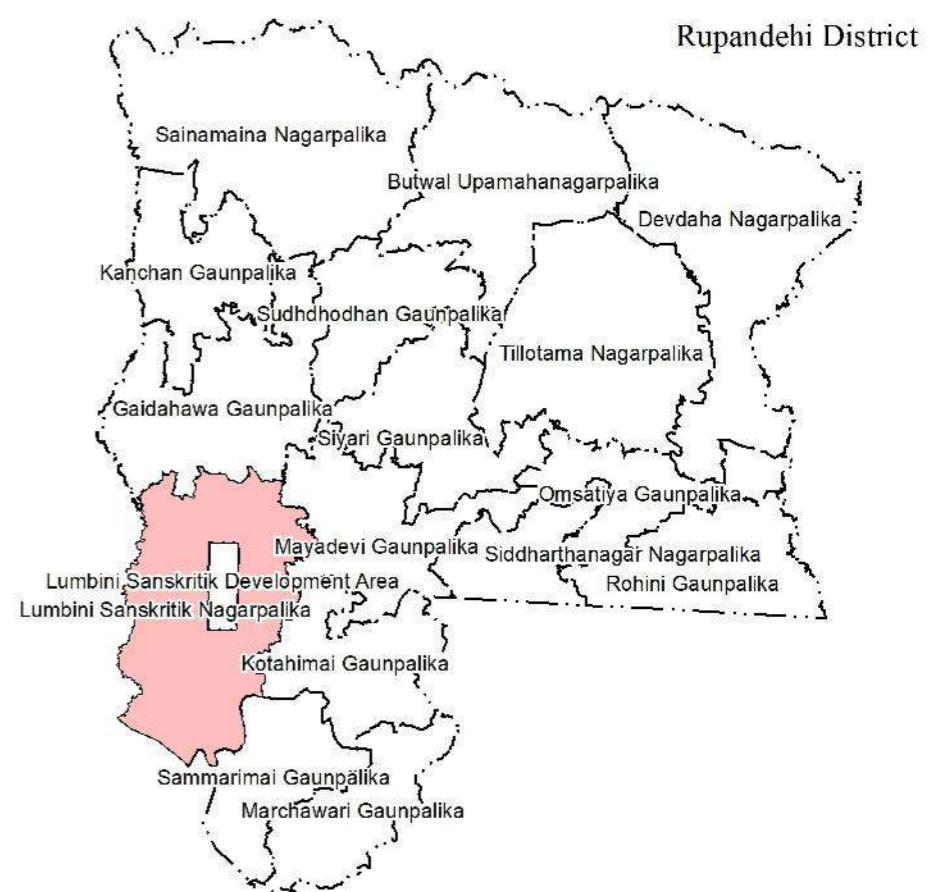
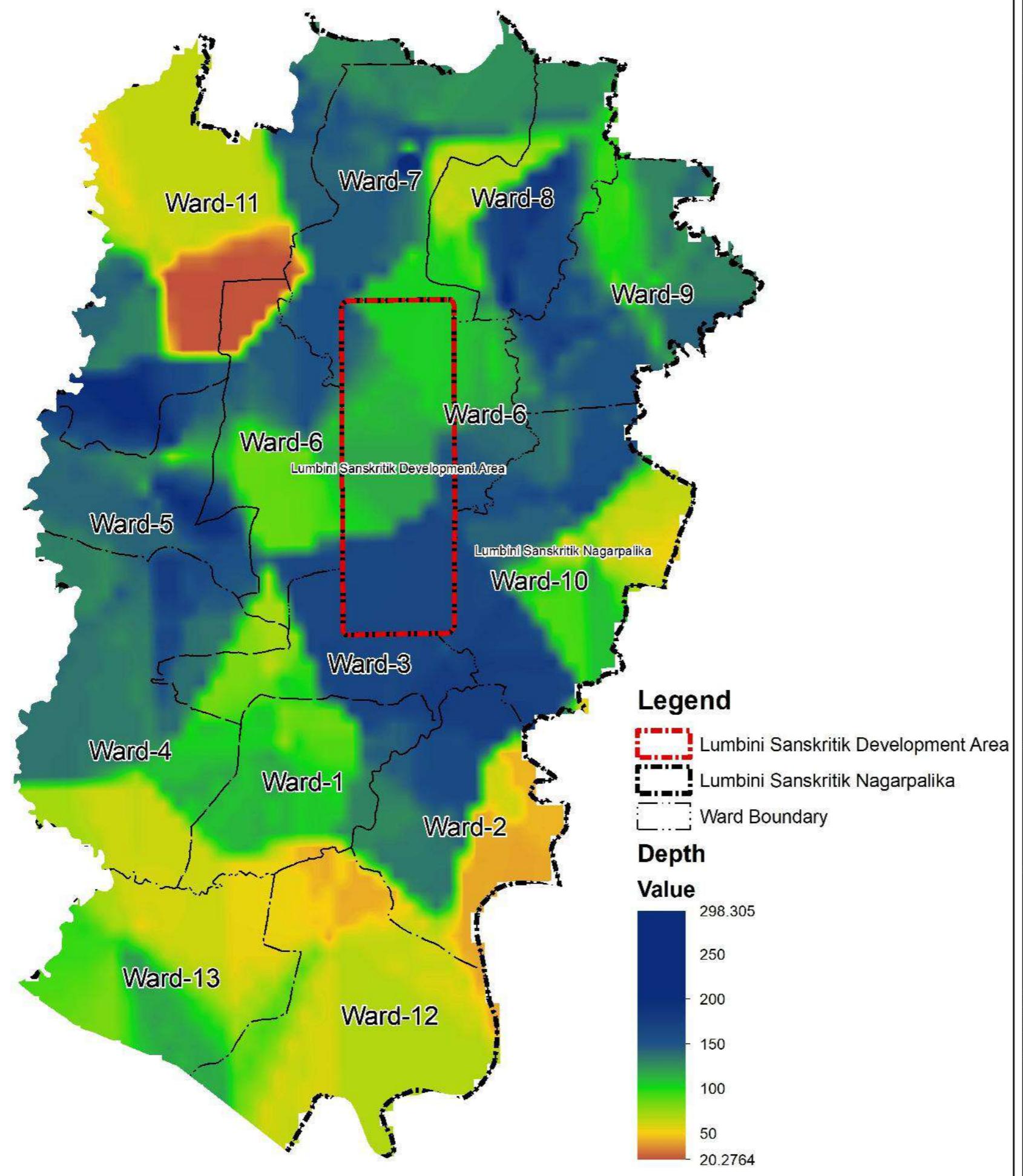
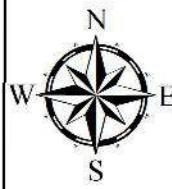
Units: Meter

Date :

MAP NO :
M-5

SHEET NO :
1

**THEMATIC MAP OF
BASED ON DEPTH
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

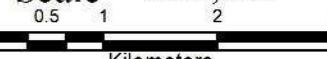
Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:66,359



Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

MAP NO :
M-5

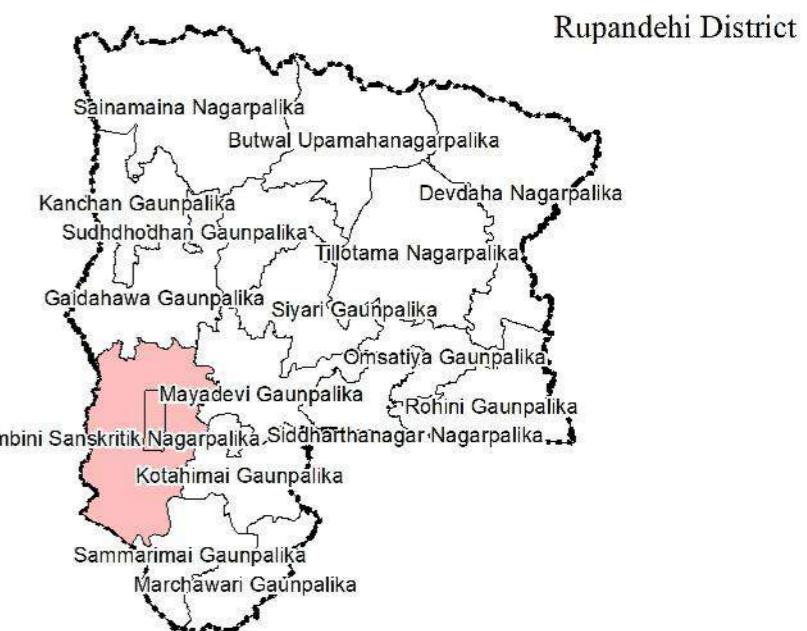
SHEET NO:
2

**TOPOGRAPHICAL MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

- Groundwater
- Municipal Boundary
- Road Alignment
- Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:3,000

0 0.025 0.05 0.1 0.15
Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

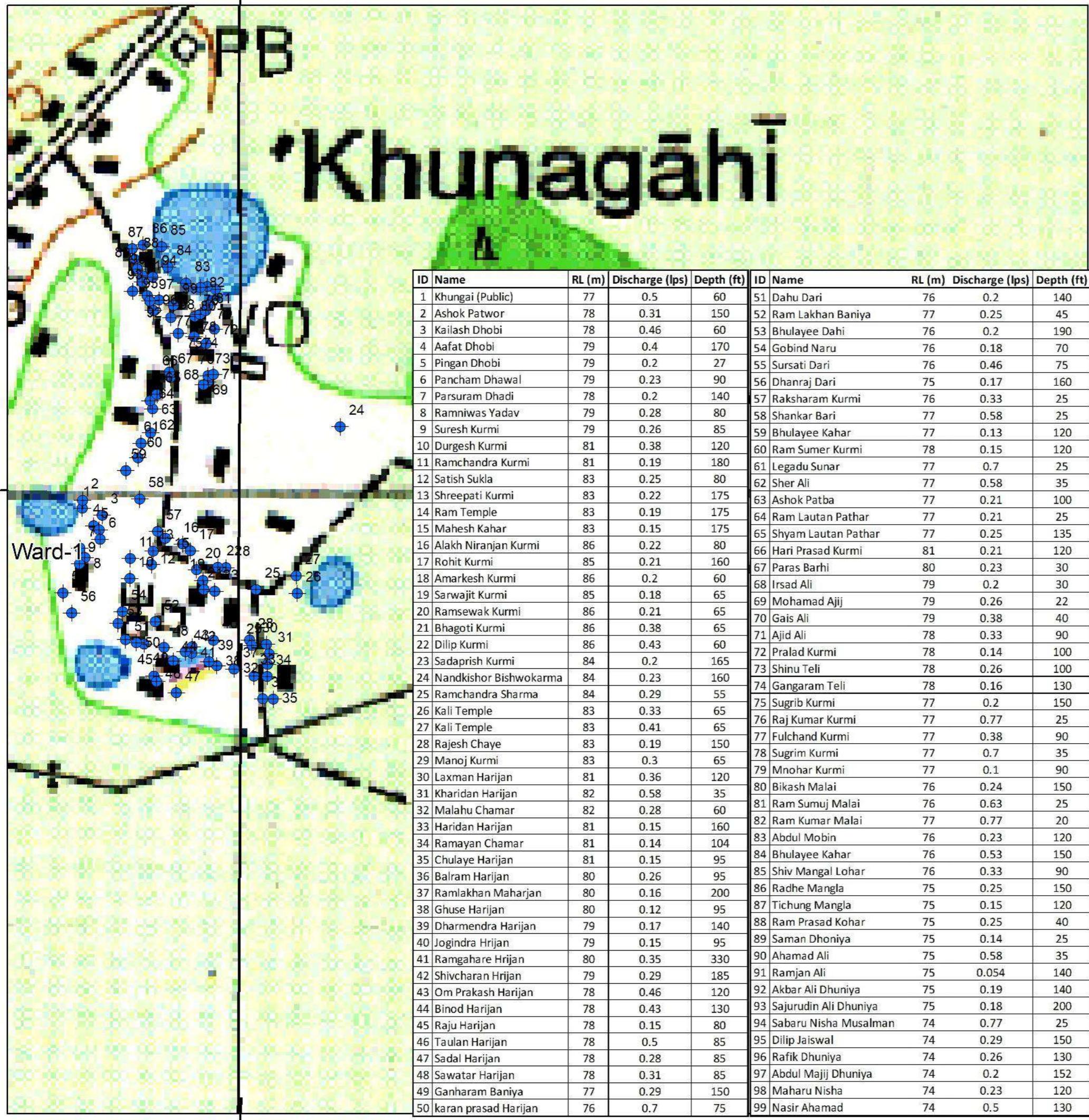
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Units: Meter

Date :

MAP NO : M-2	SLIEET NO : 1
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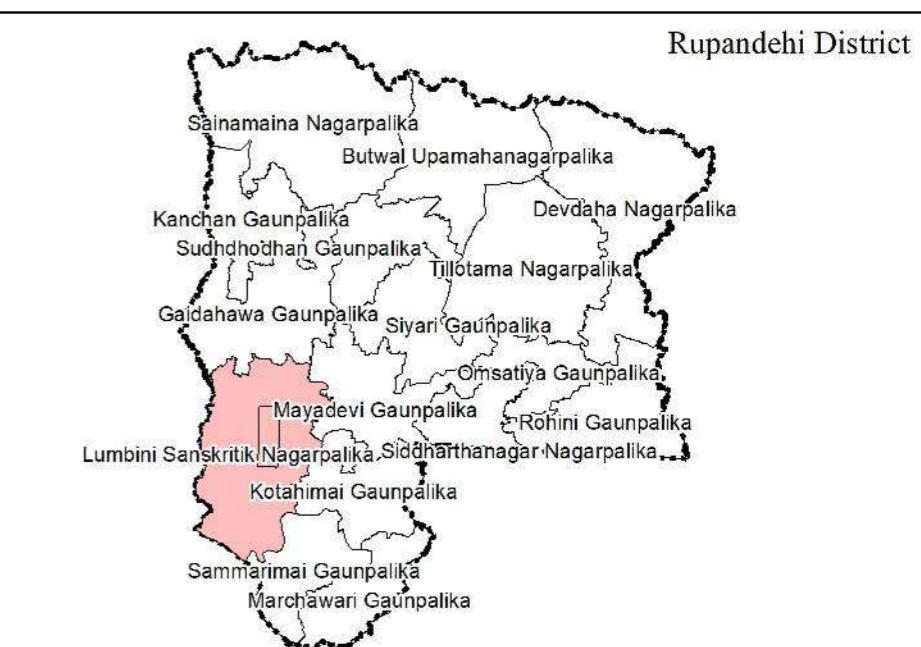
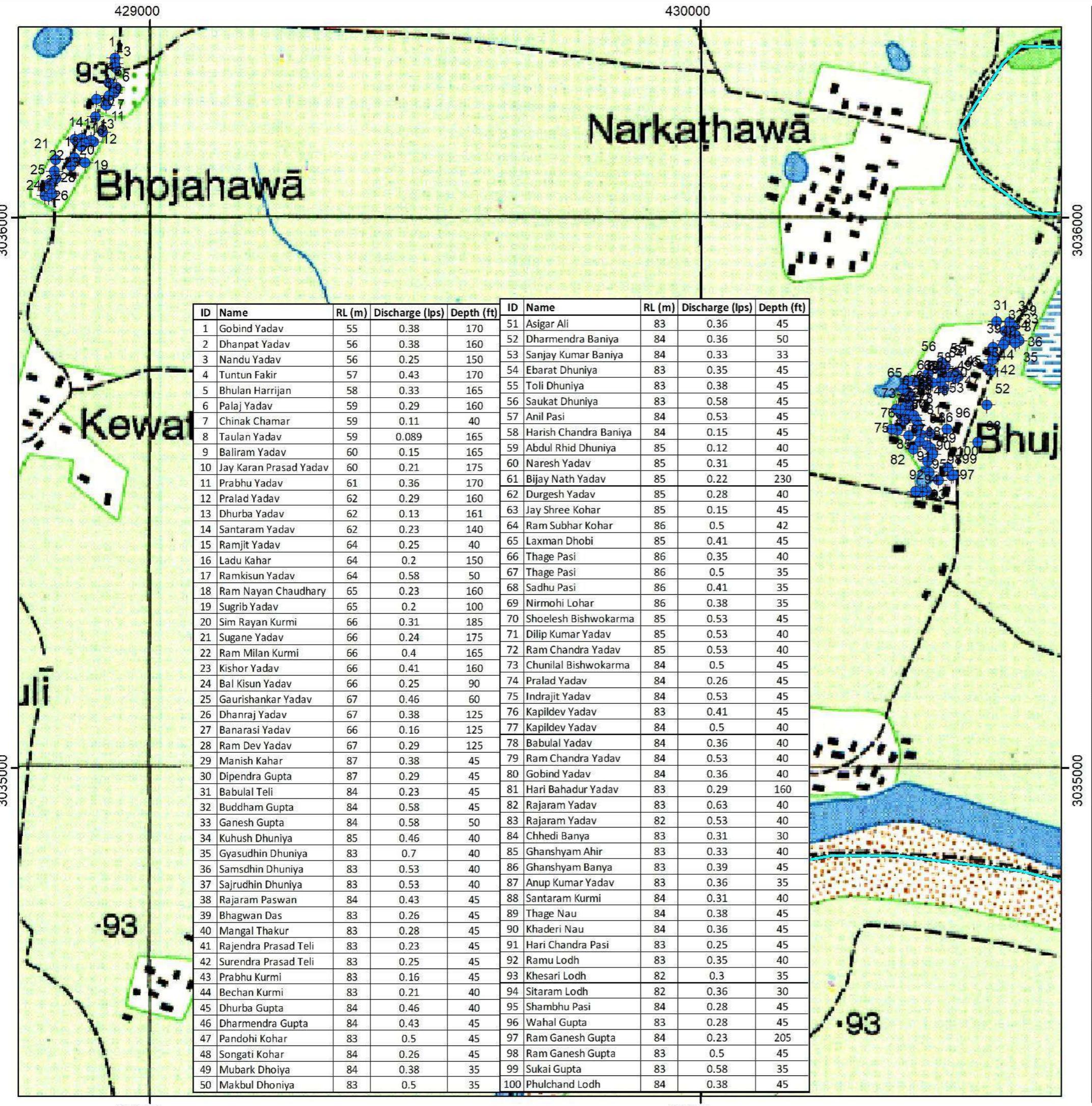


**TOPOGRAPHICAL MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

- Groundwater
- Municipal Boundary
- Road Alignment
- Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:

Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:7,000

0 0.05 0.1 0.2 0.3
Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

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Central Meridian: 84.0000

Scale Factor: 0.9996

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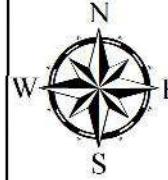
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Date :

MAP NO:
M-2

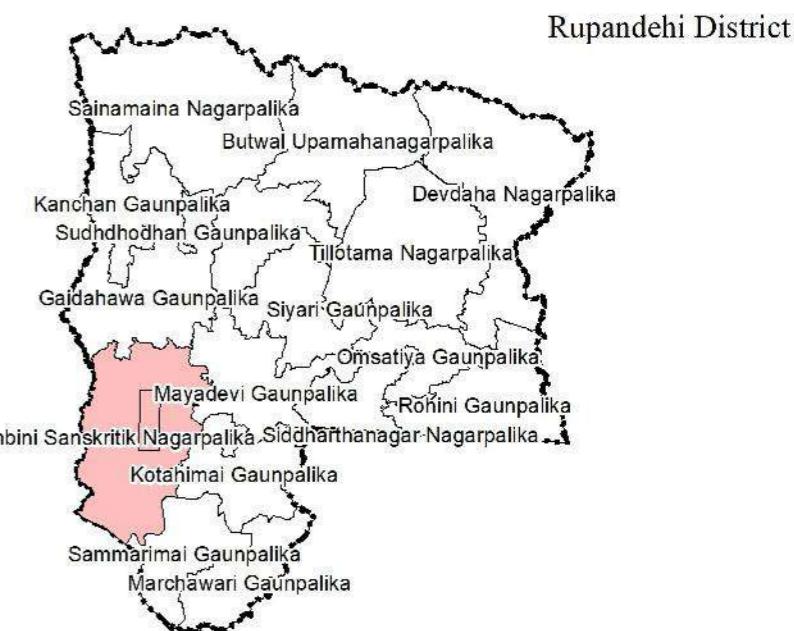
SLIEET NO:
2

**TOPOGRAPHICAL MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

- Groundwater
- Municipal Boundary
- Road Alignment
- Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:11,864



Date :

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

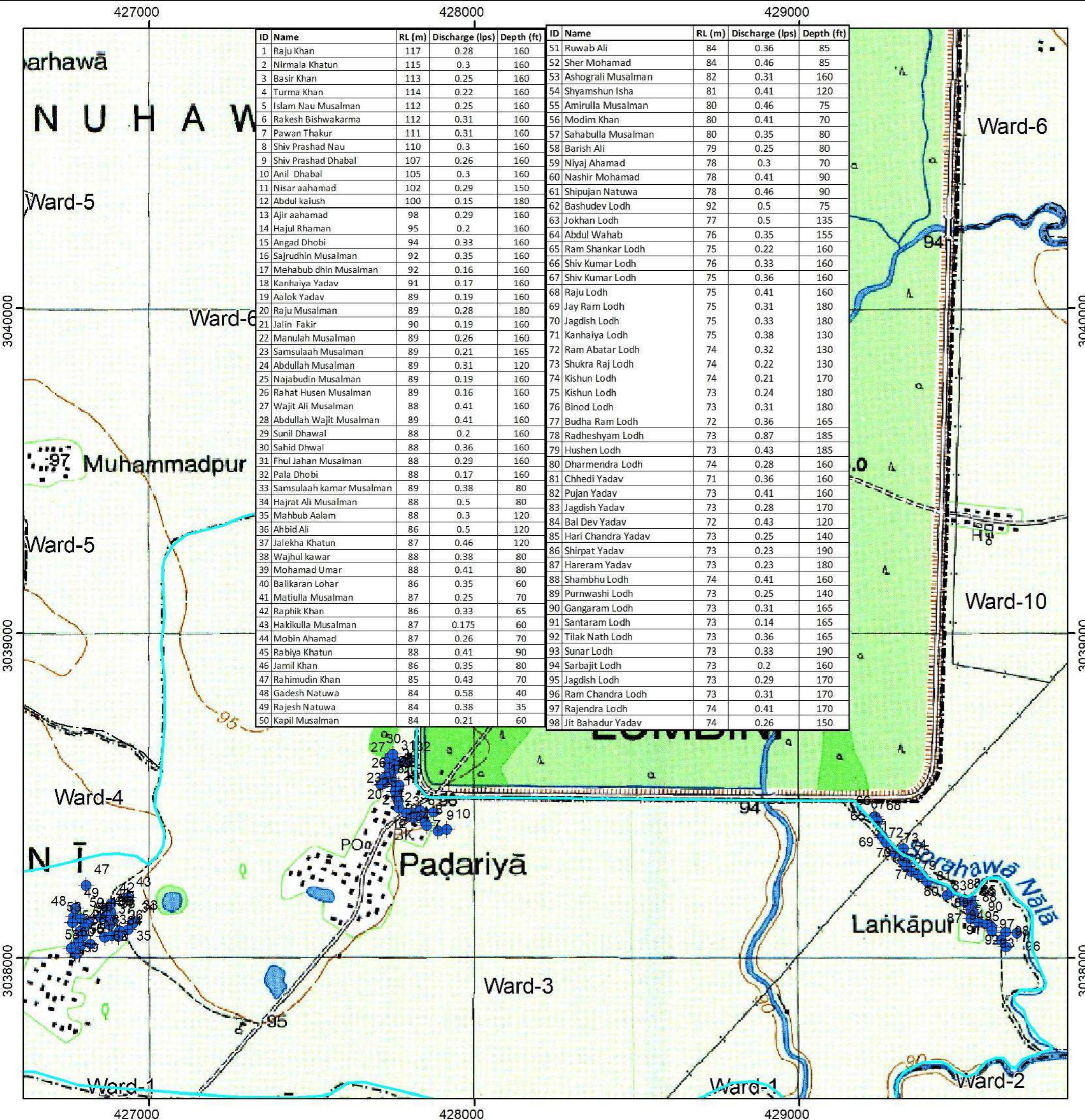
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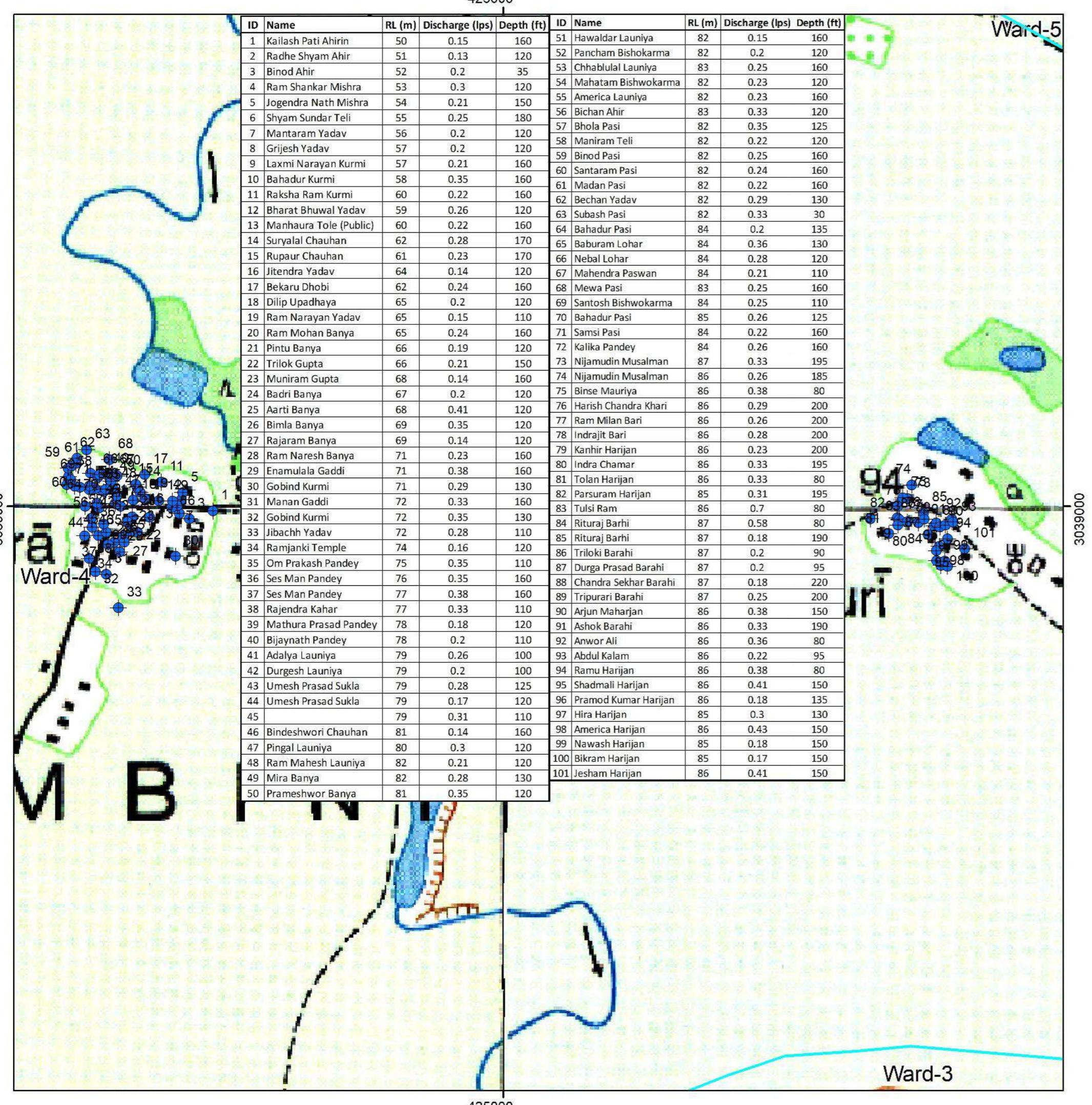
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Units: Meter

MAP NO : M-2

SHEET NO : 3





TOPOGRAPHICAL MAP OF GROUNDWATER POINTS LUMBINI SANSKRITIK NAGARPALIKA

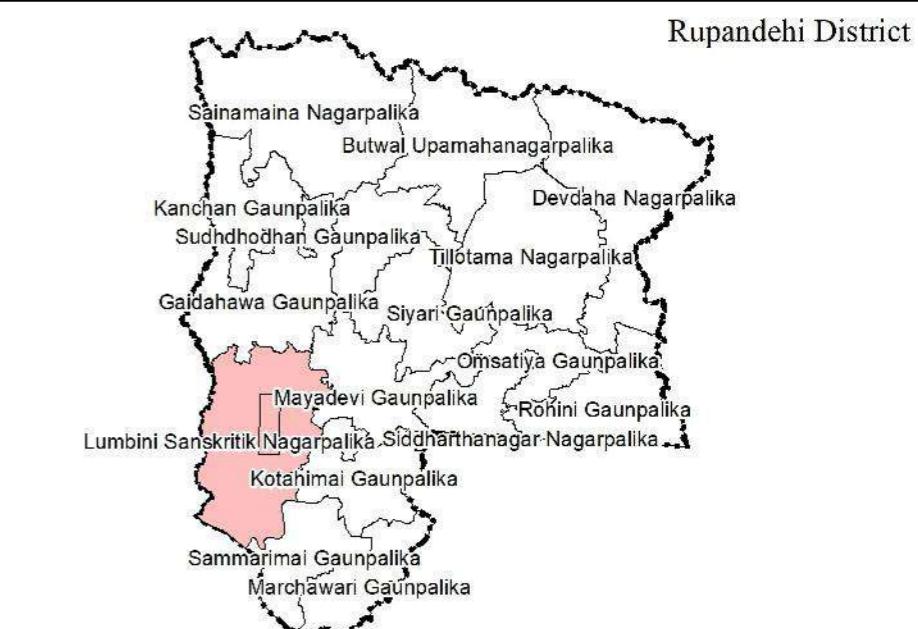


Legend

Groundwater (Blue Dot) Municipal Boundary (Dashed Line)

Road Alignment (Red Line)

Ward Boundary (Dotted Line)



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:

Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:5,345

0 0.0425 0.085 0.17 0.255

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

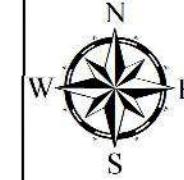
Units: Meter

Date :

MAP NO : M-2

SHEET NO : 4

**TOPOGRAPHICAL MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

Groundwater

Municipal Boundary

Road Alignment

Ward Boundary

Rupandehi District



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:5,941

0 0.05 0.1 0.2 0.3
Kilometers

Date :

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

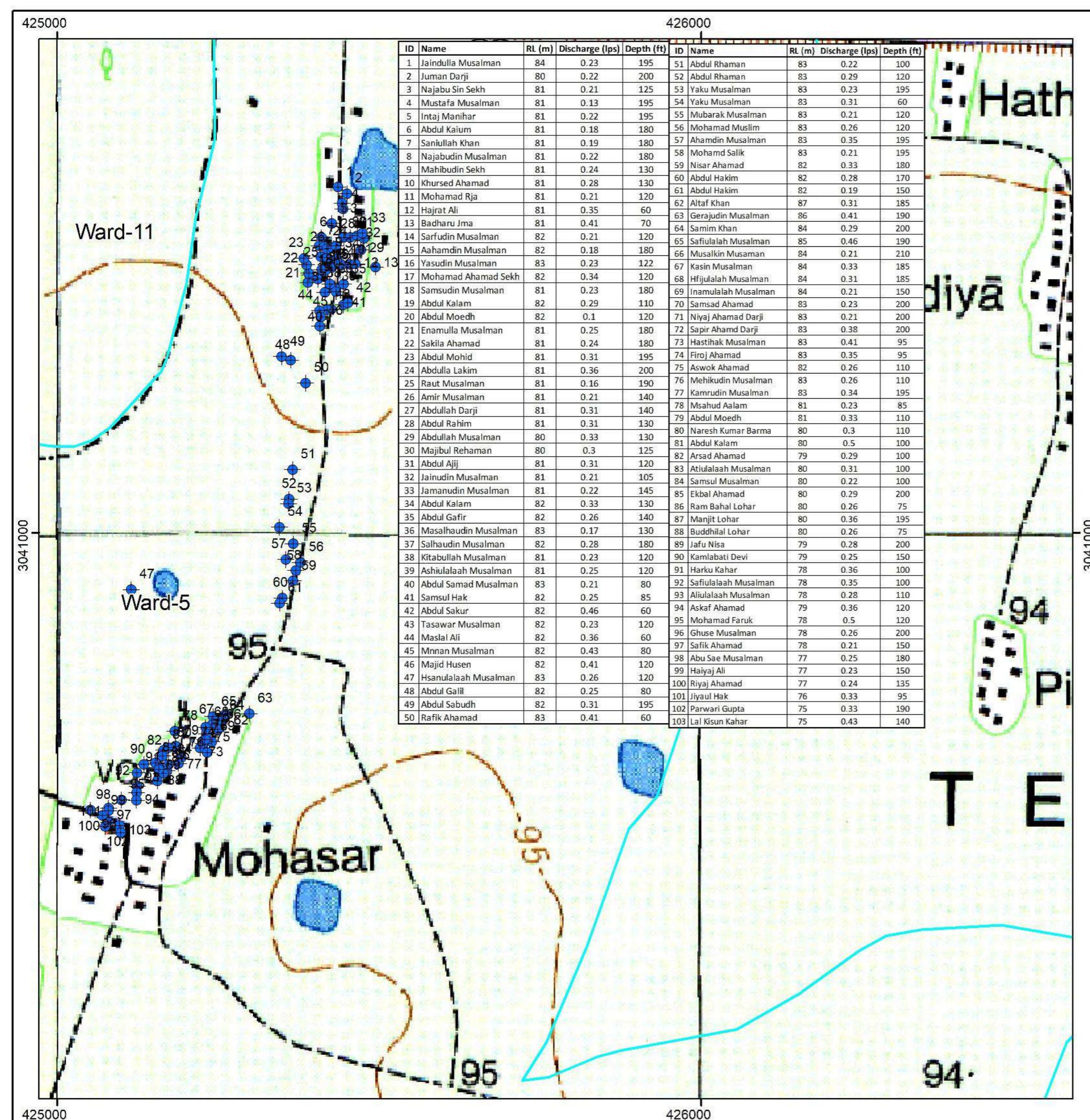
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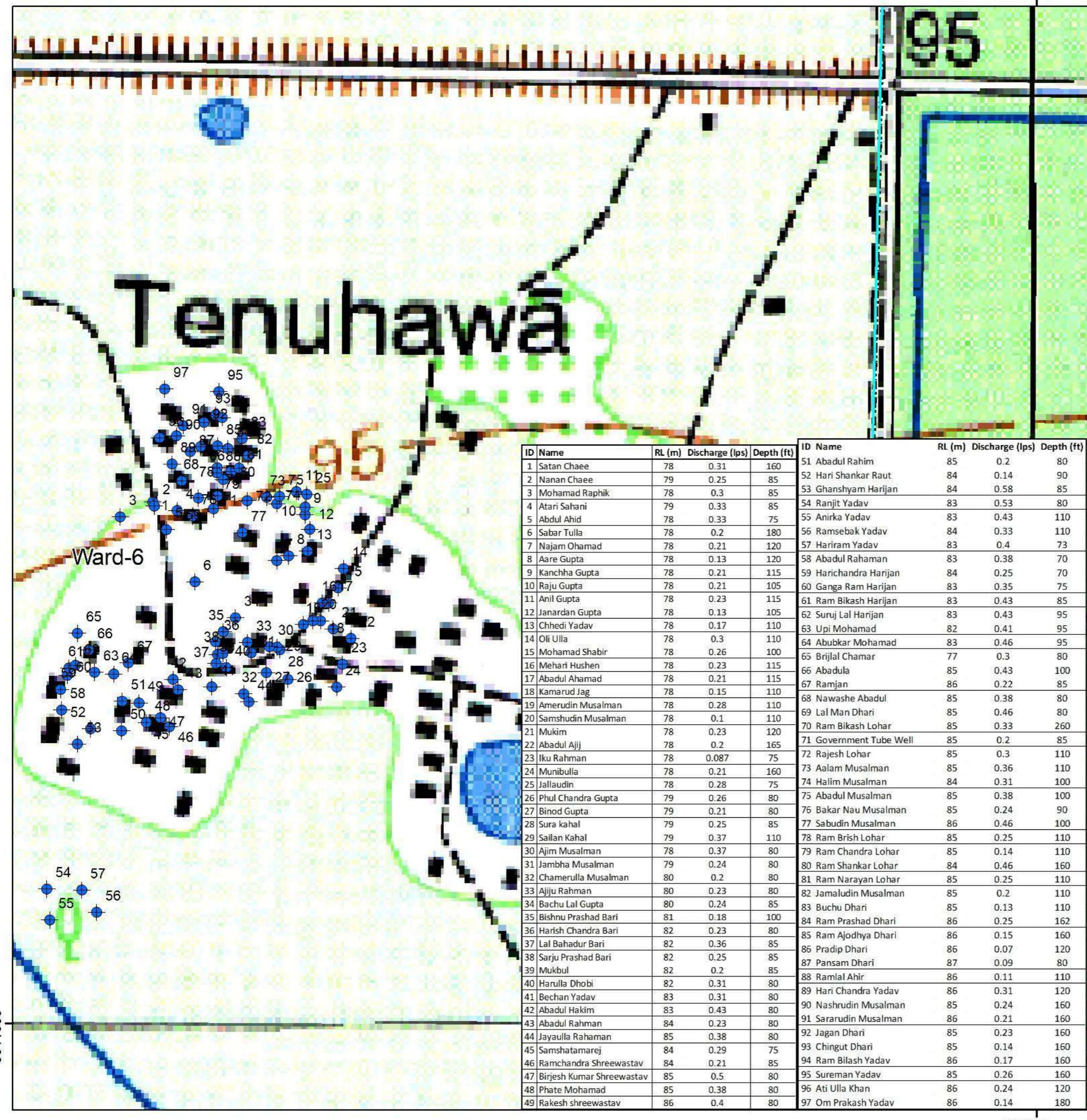
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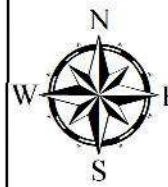
MAP NO :
M-2

SHEET NO:
5





TOPOGRAPHICAL MAP OF GROUNDWATER POINTS LUMBINI SANSKRITIK NAGARPALIKA



Legend

- Groundwater
- Municipal Boundary
- Road Alignment
- Ward Boundary

Rupandehi District



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:3,082

0 0.025 0.05 0.1 0.15
Kilometers

Date :

Coordinate System: Modified UTM 84
Projection: Transverse Mercator
Datum: Everest 1830
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9996
Latitude Of Origin: 0.0000
Units: Meter

MAP NO : M-2

SLIEET NO : 6

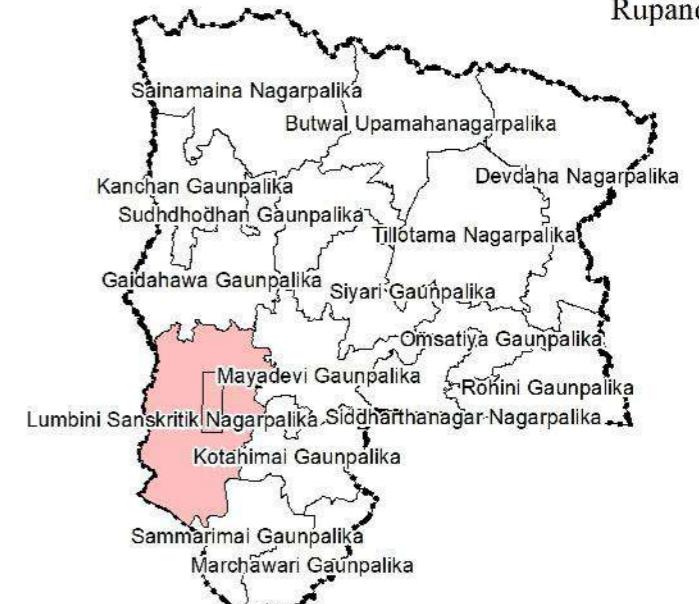
**TOPOGRAPHICAL MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

- Groundwater
- Municipal Boundary
- Road Alignment
- Ward Boundary

Rupandehi District



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

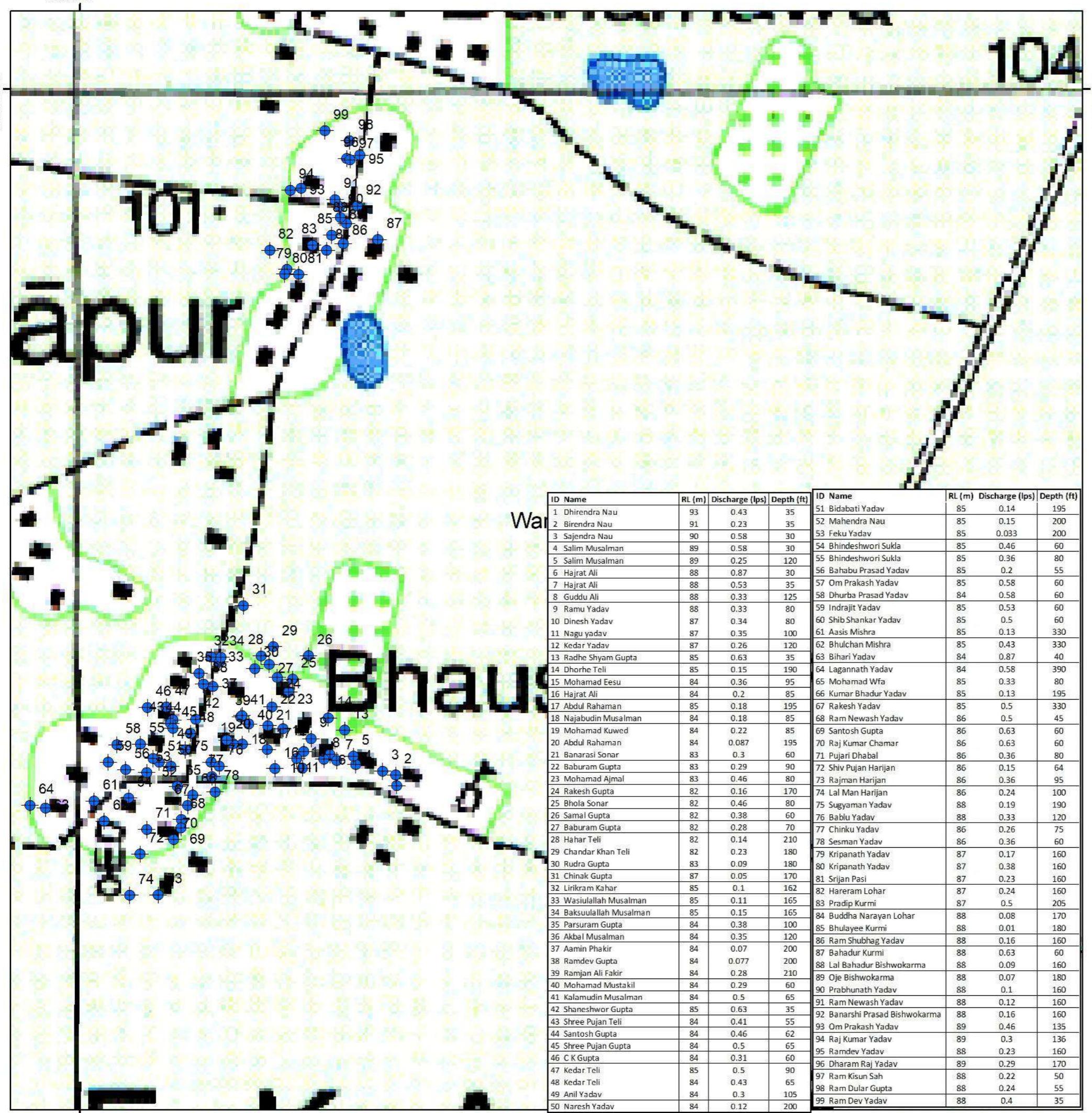
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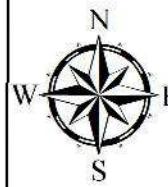
Date :

Coordinate System: Modified UTM 84
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Datum: Everest 1830
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Central Meridian: 84.0000
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Units: Meter

MAP NO: M-2 **SHEET NO:** 7

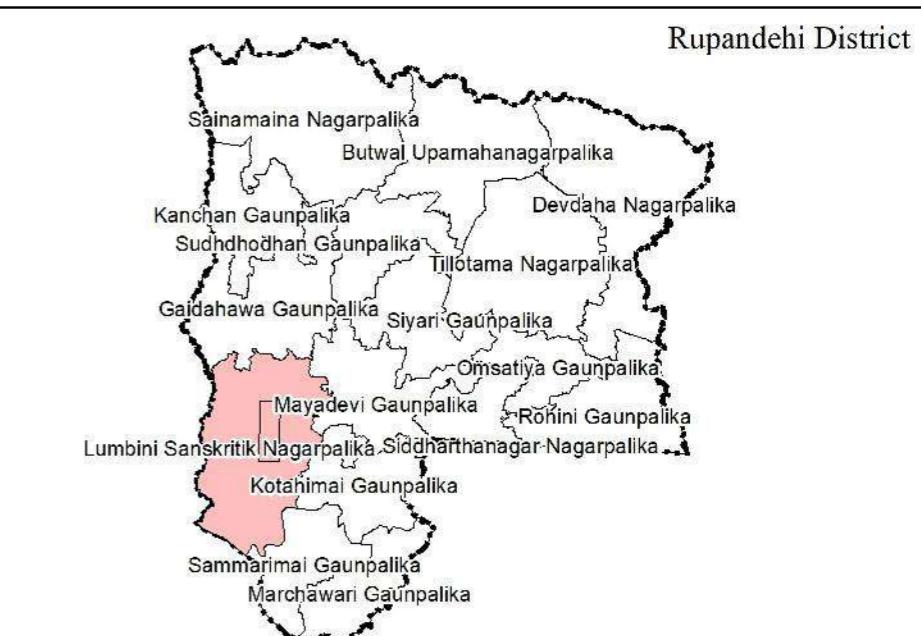
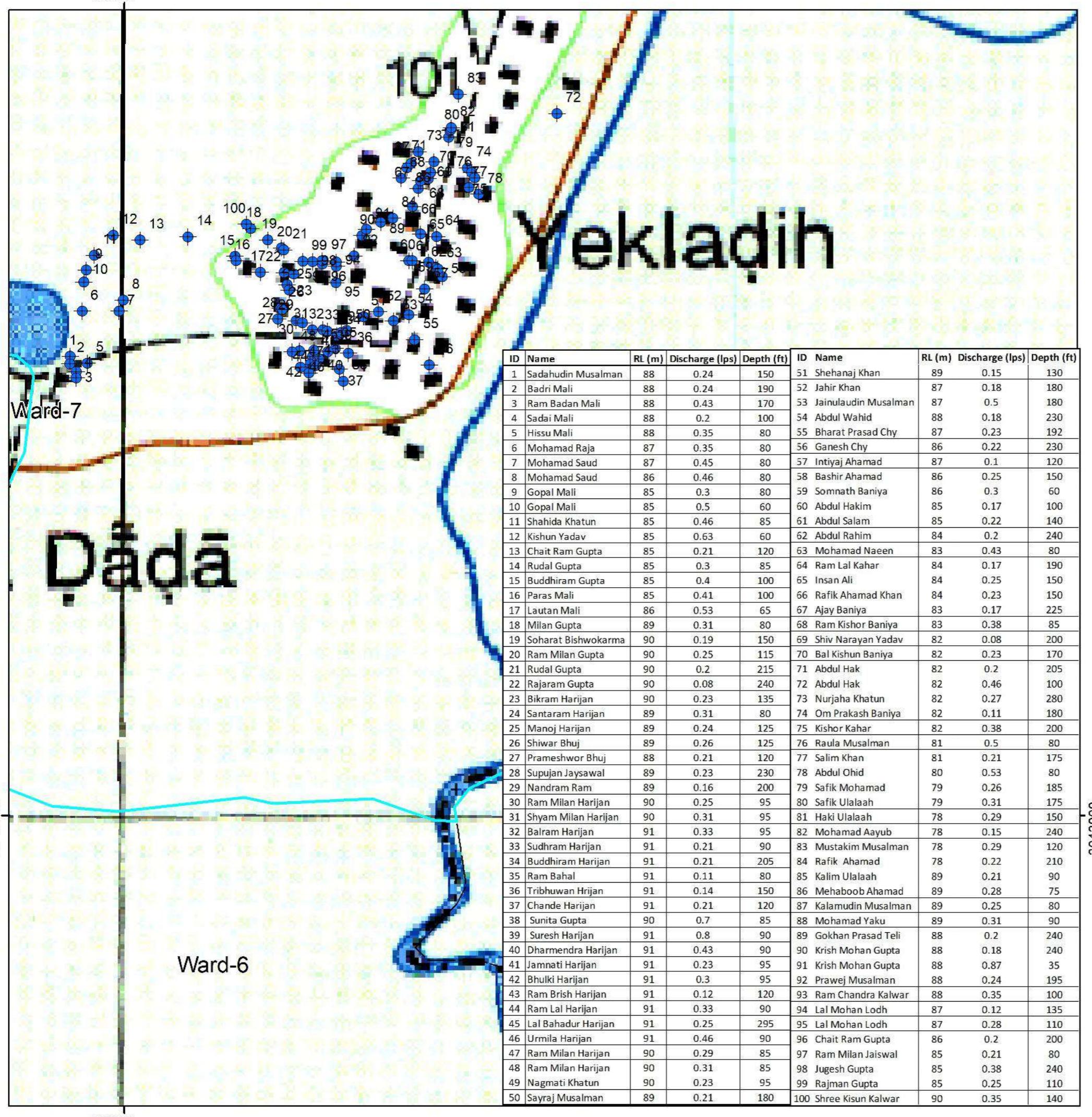


**TOPOGRAPHICAL MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

- Groundwater
- Municipal Boundary
- Road Alignment
- Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:3,650

0 0.03 0.06 0.12 0.18
Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

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False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

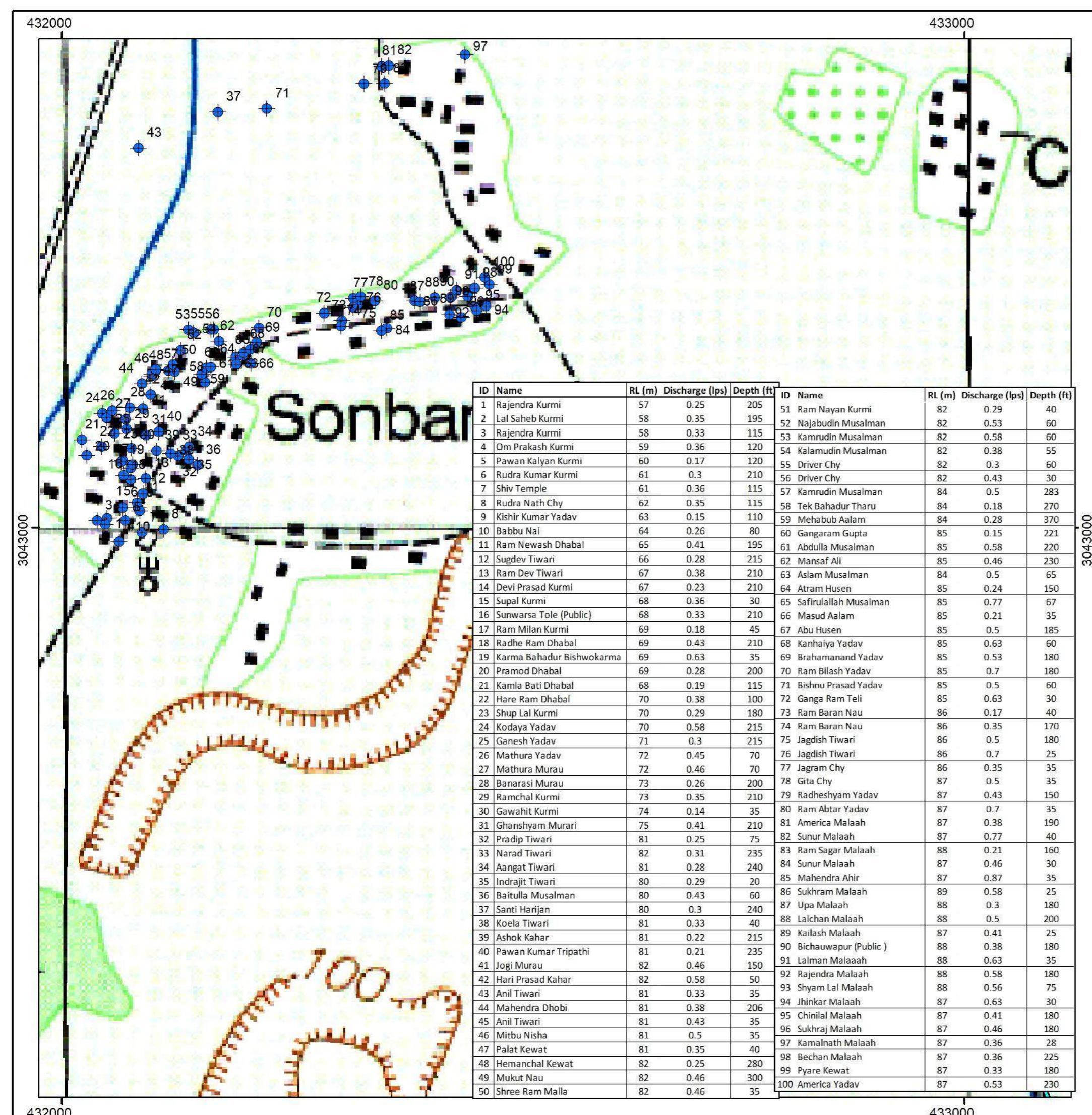
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Units: Meter

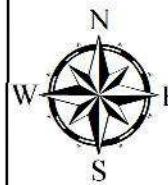
Date :

MAP NO : M-2

SLIEET NO : 8



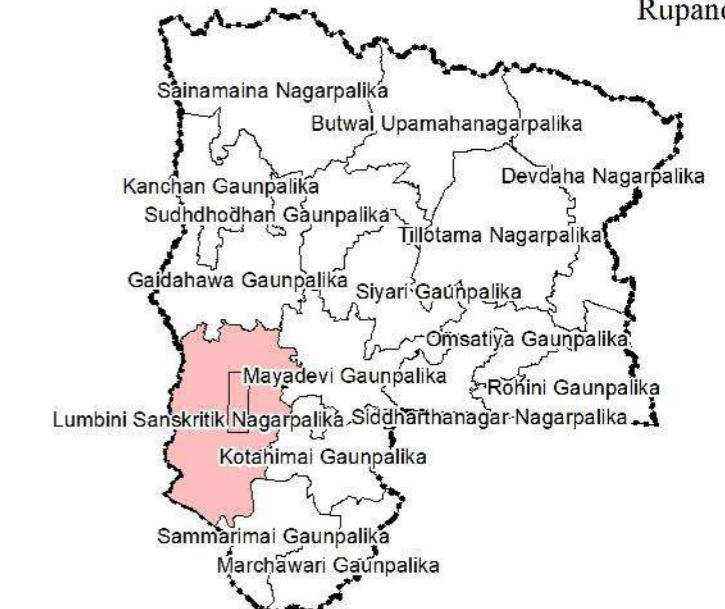
TOPOGRAPHICAL MAP OF GROUNDWATER POINTS LUMBINI SANSKRITIK NAGARPALIKA



Legend

- Groundwater
 - Municipal Boundary
 - Road Alignment
 - - - Ward Boundary

Rupandehi District



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:4,226

0.035 0.07 0.14 0.1

Kilometers

Kilometers

Date :

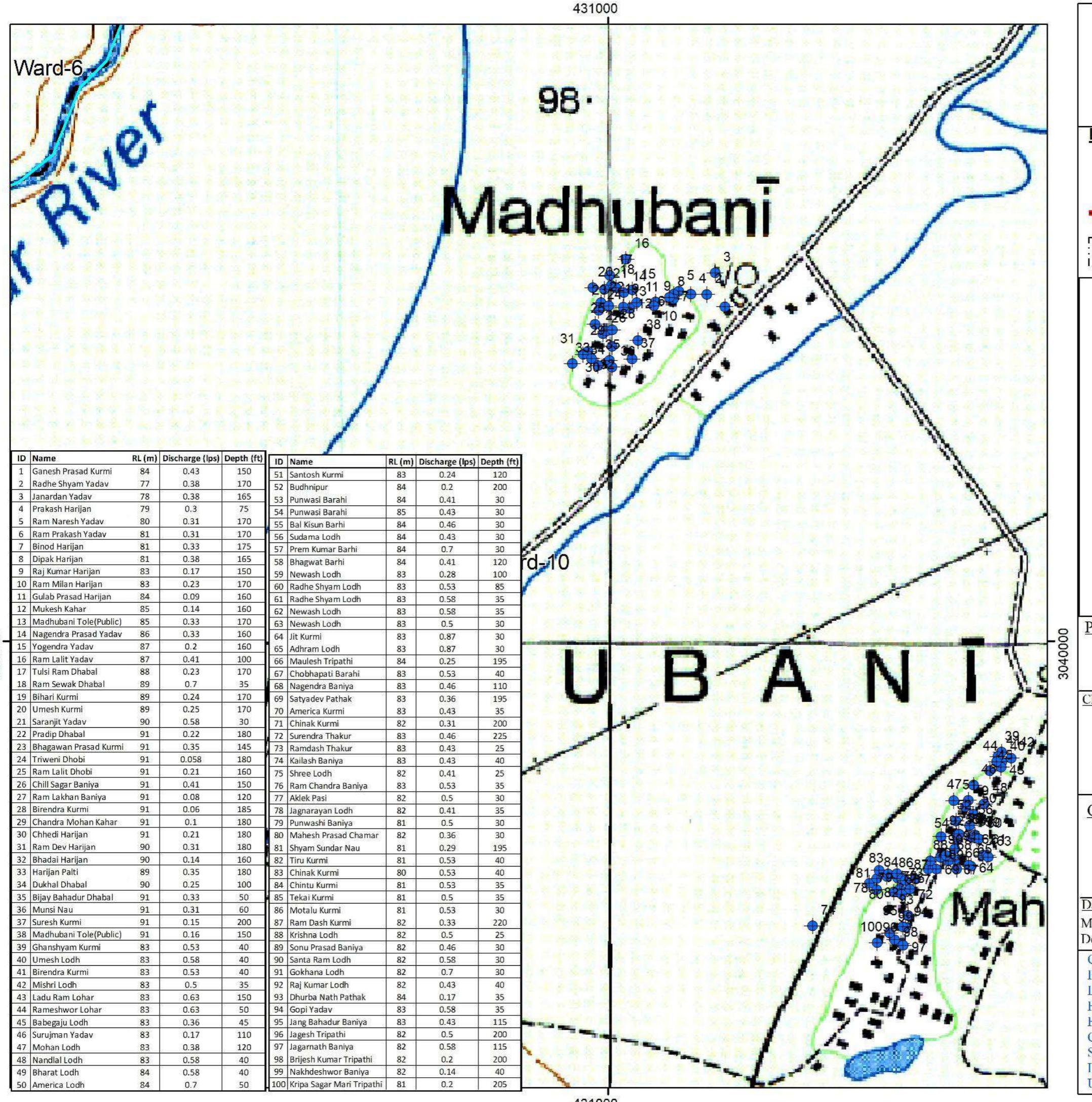
ANSWER

MAP NO : SHEET NO:

Journal of Health Politics, Policy and Law, Vol. 32, No. 4, December 2007
DOI 10.1215/03616878-32-4 © 2007 by The University of Chicago

M-2 | 9

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TOPOGRAPHICAL MAP OF GROUNDWATER POINTS LUMBINI SANSKRITIK NAGARPALIKA



Legend

- Groundwater (Blue dot)
- Municipal Boundary (Dashed line)
- Road Alignment (Red line)
- Ward Boundary (Solid line)

Rupandehi District



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:5,766

0 0.0475 0.095 0.19 0.285
Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

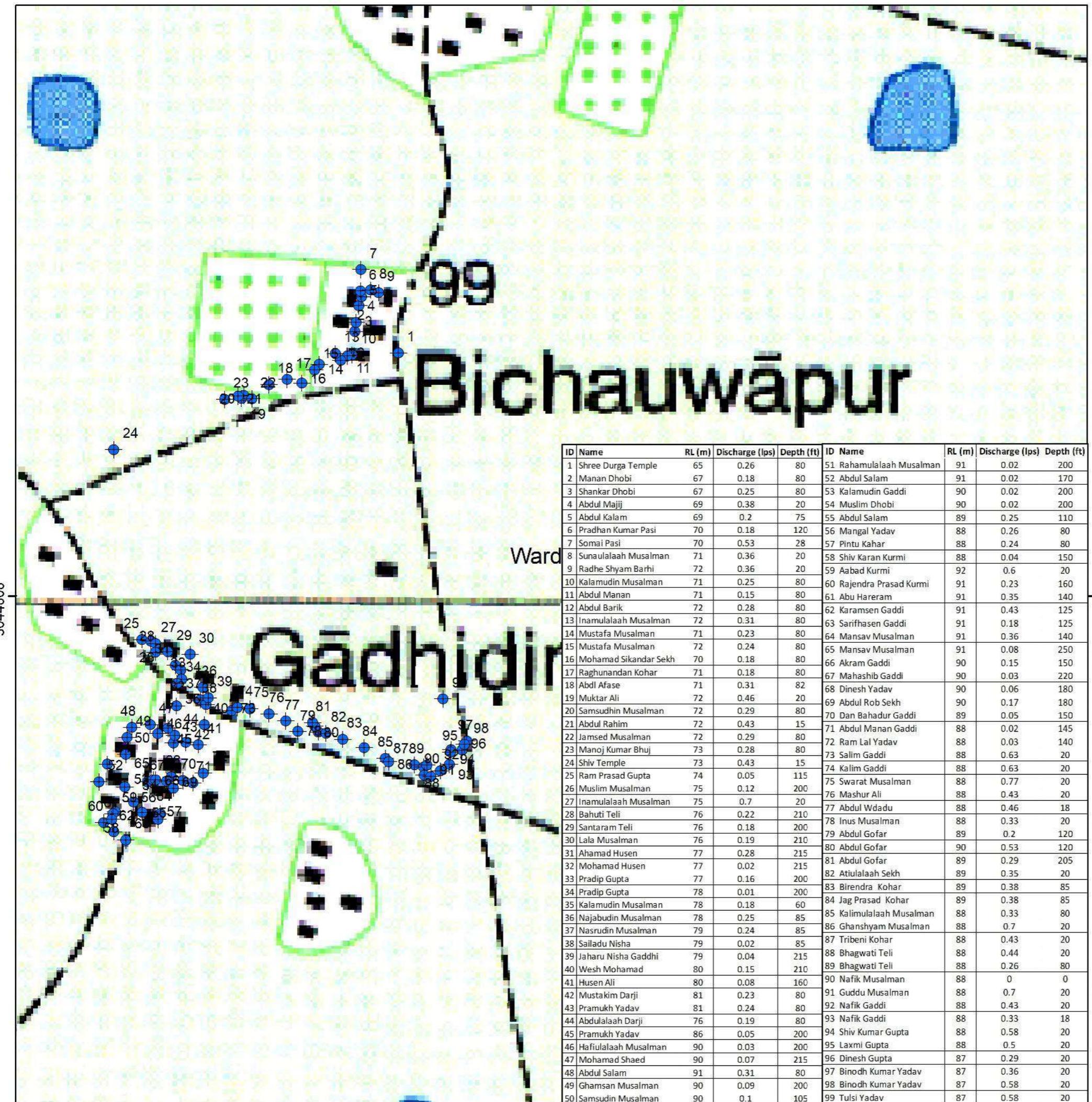
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Units: Meter

Date :

MAP NO : M-2
SHEET NO : 10

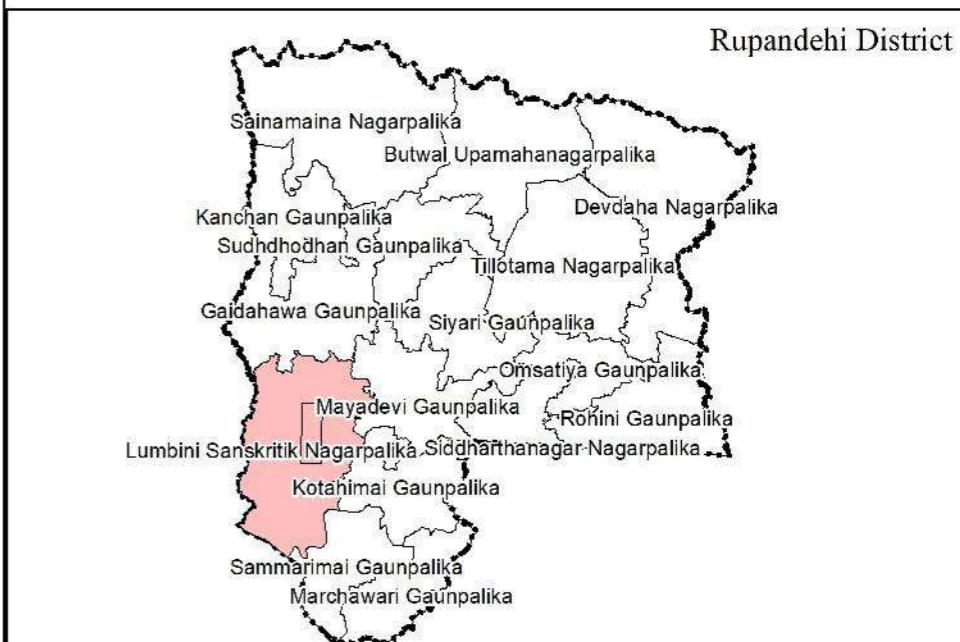


TOPOGRAPHICAL MAP OF GROUNDWATER POINTS LUMBINI SANSKRITIK NAGARPALIKA



Legend

- Groundwater
 - Municipal Boundary
 - Road Alignment
 - - - Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

**Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu**

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Coordinate System: Modified UTM 84

Coordinate System: Modified UTM Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000
Unit: Meter

Units: Meter

Scale 1:3,508

Scale 1:5,000

Kilometers

Date :

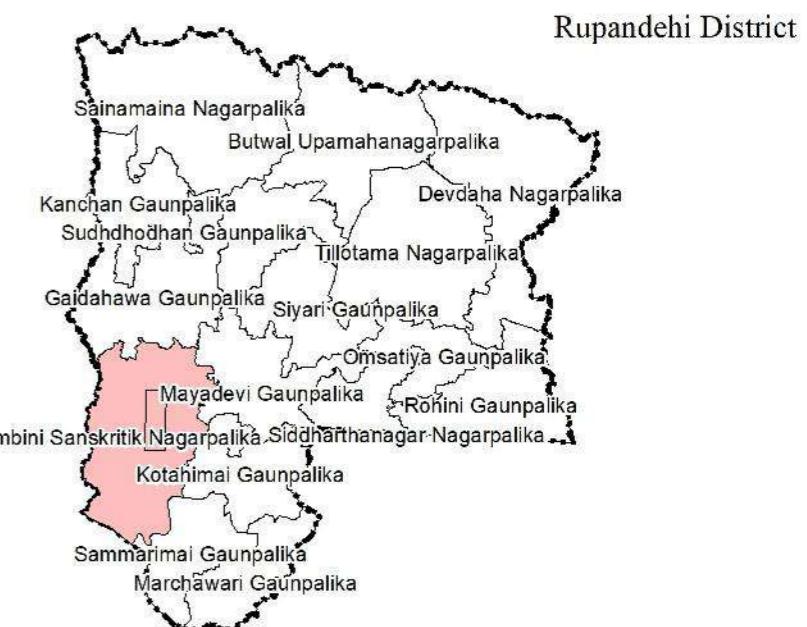
MAP NO :	SHEET NO:
M-2	11

**TOPOGRAPHICAL MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

- Groundwater
- Municipal Boundary
- Road Alignment
- Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:3,300

0 0.025 0.05 0.1 0.15
Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

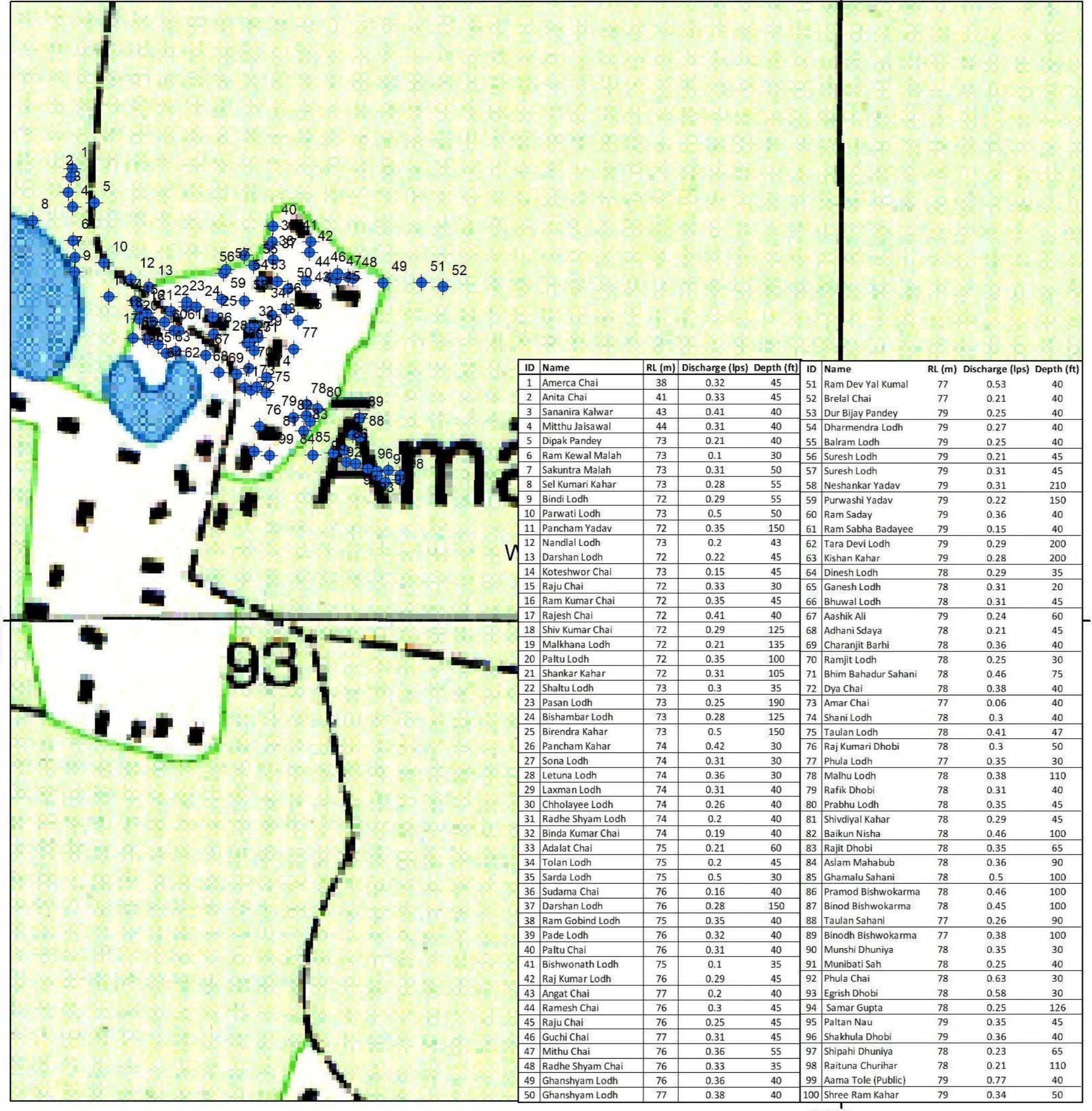
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Latitude Of Origin: 0.0000

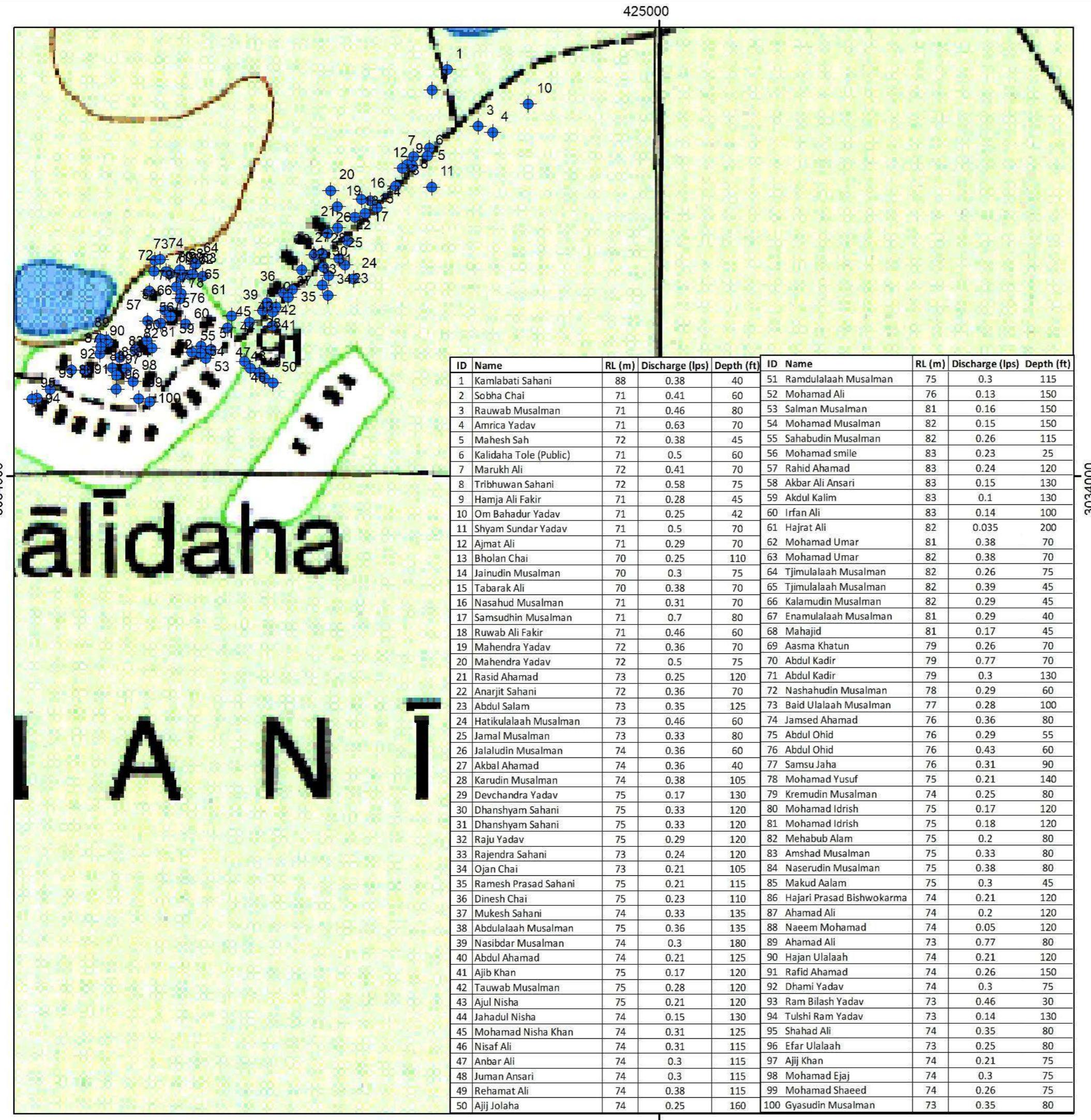
Units: Meter

Date :

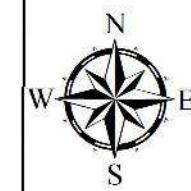
MAP NO : M-2	SHEET NO : 12
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428000



TOPOGRAPHICAL MAP OF GROUNDWATER POINTS LUMBINI SANSKRITIK NAGARPALIKA



Legend

Groundwater (Blue dot) Municipal Boundary (Dashed black line)

Road Alignment (Red line)

Ward Boundary (Dotted black line)

Rupandehi District



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:

Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:3,919

0 0.0325 0.065 0.13 0.195

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

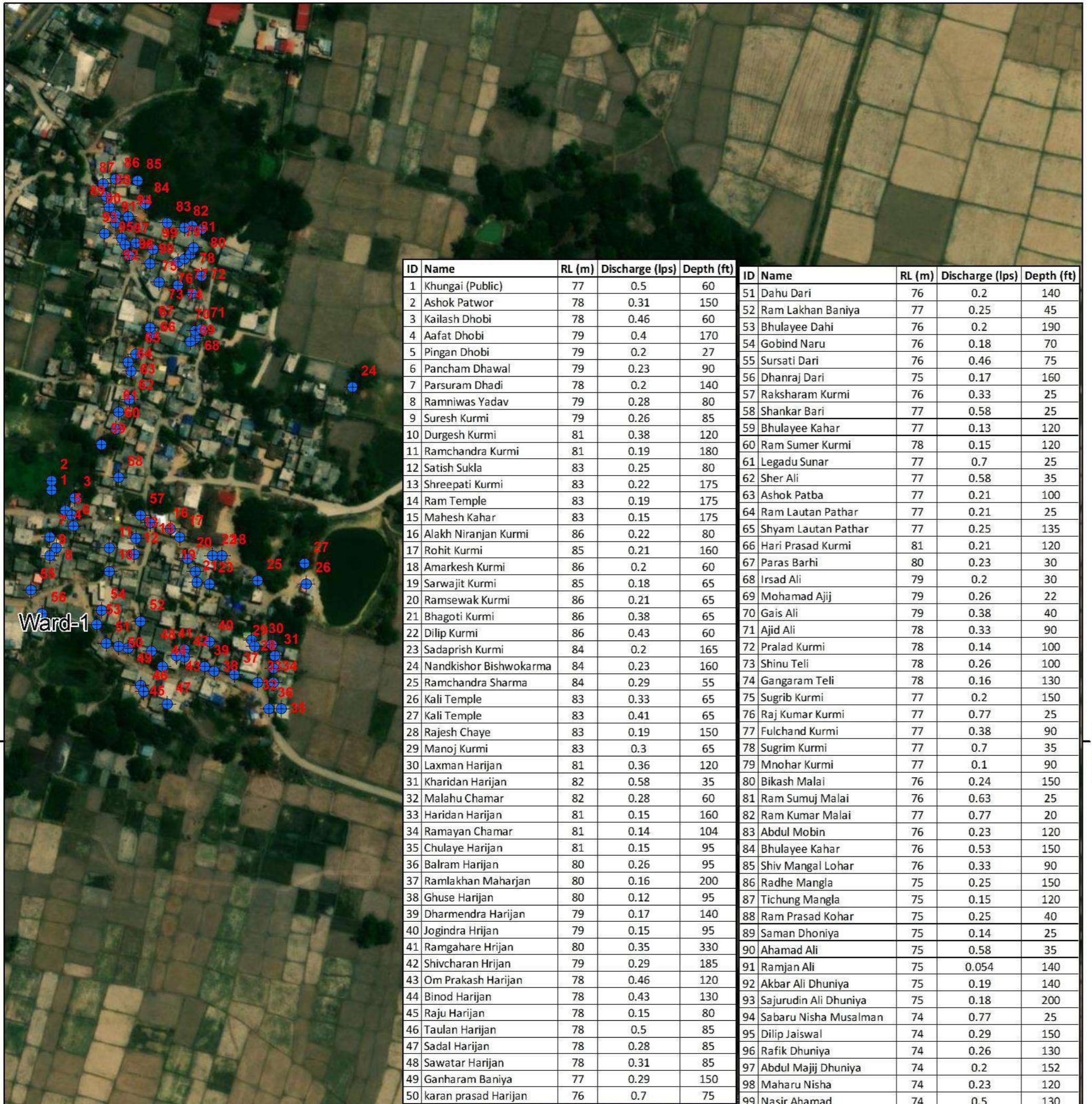
Units: Meter

Date :

MAP NO : M-2

SLIEET NO : 13

**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**

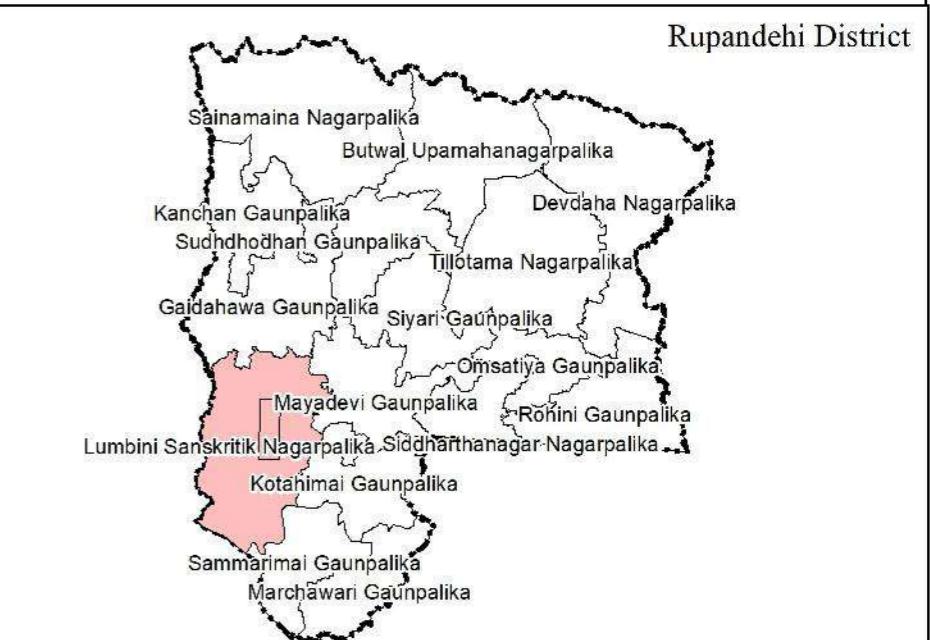


Legend

Groundwater

Municipal Boundary

Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source :

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:2,554

0 0.02 0.04 0.08 0.12

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

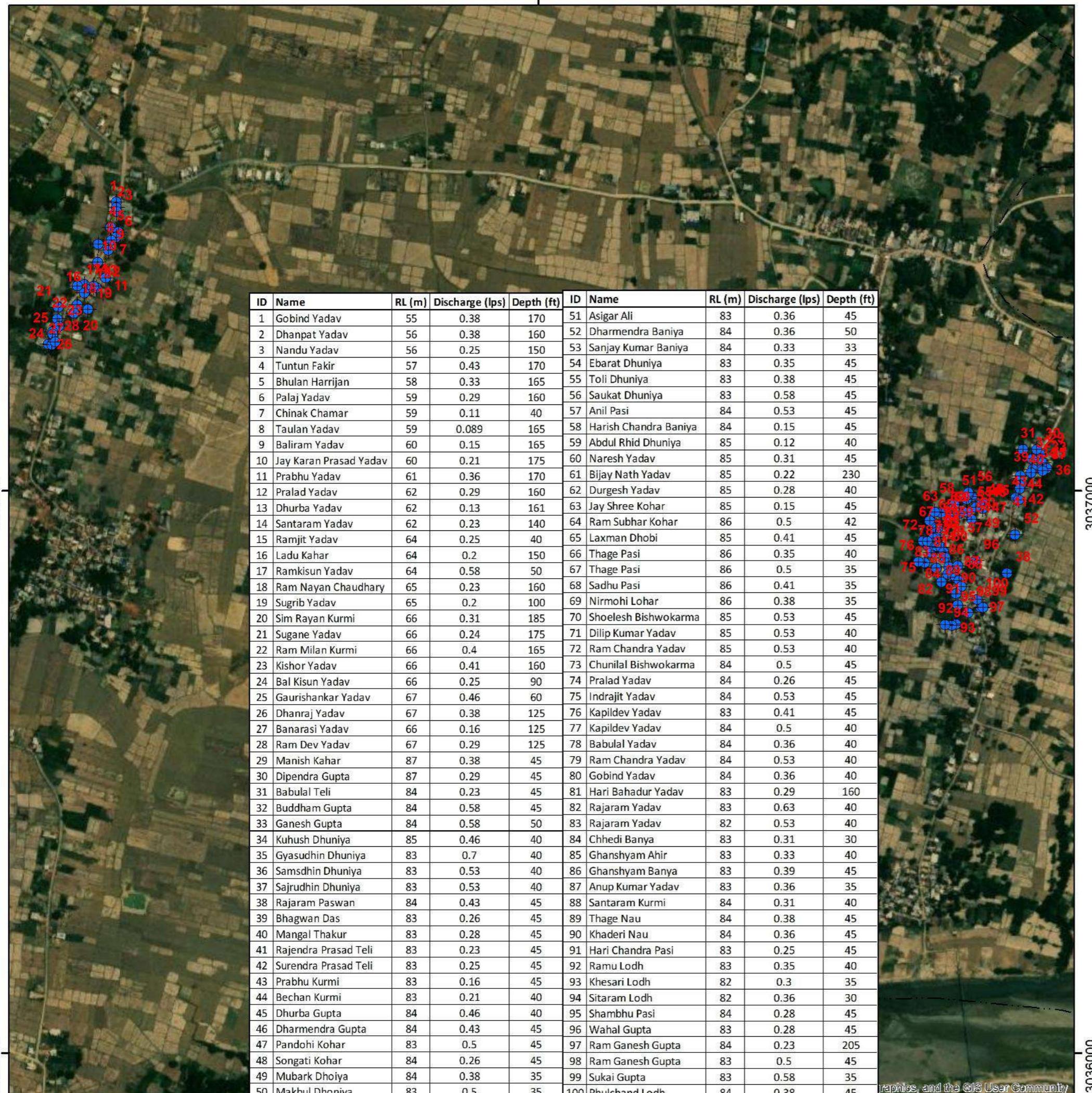
MAP NO :

M-3

SHEET NO:

1

**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Graphics, and the GIS User Community

Legend

Groundwater

Ward Boundary

Rupandehi District



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale: 1:7,000

0 0.05 0.1 0.2 0.3
Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

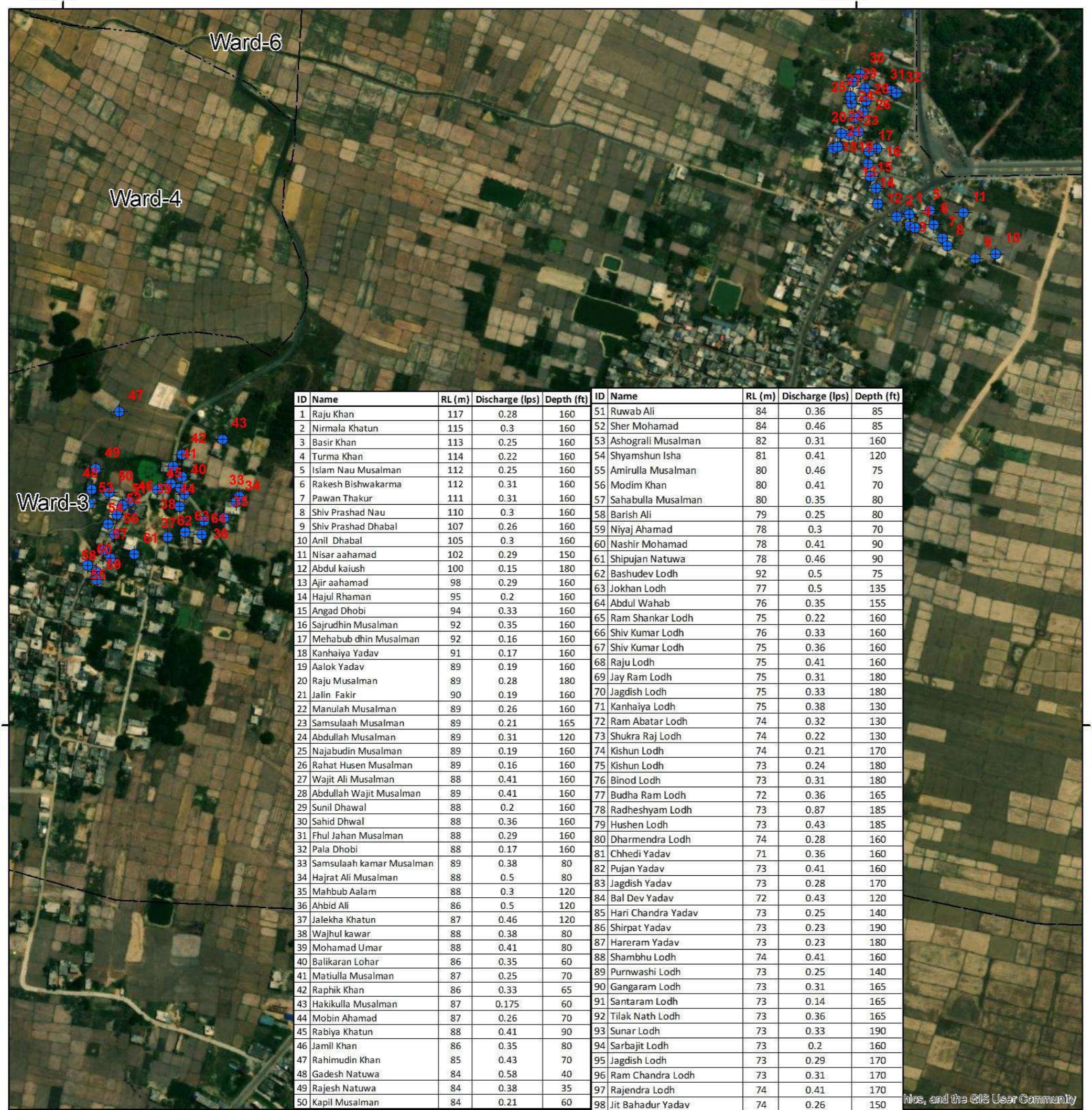
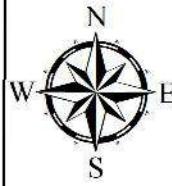
Units: Meter

Date :

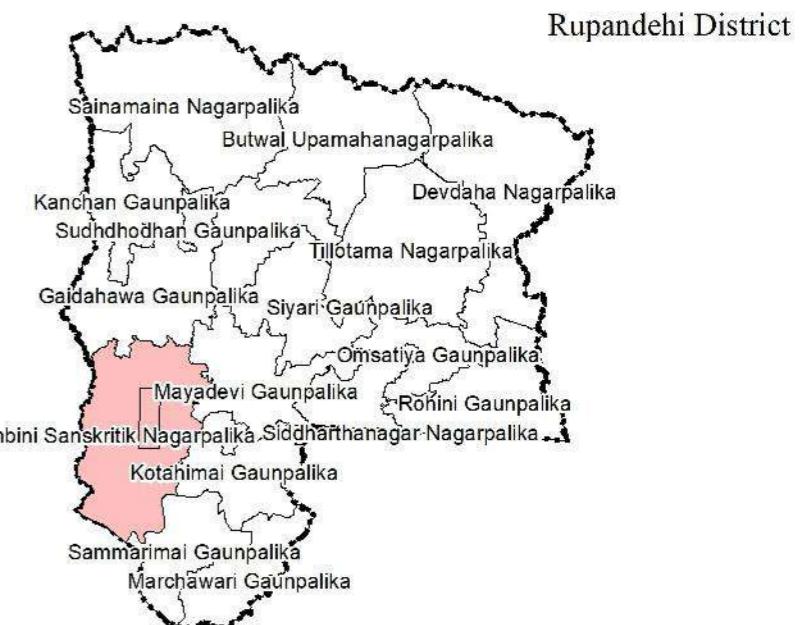
MAP NO: M-3

SLIEET NO: 2

**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Map Source: and the GIS User Community



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:

Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:5,000

0 0.04 0.08 0.16 0.24

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

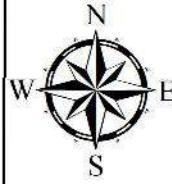
MAP NO:

SLIEET NO:

M-3

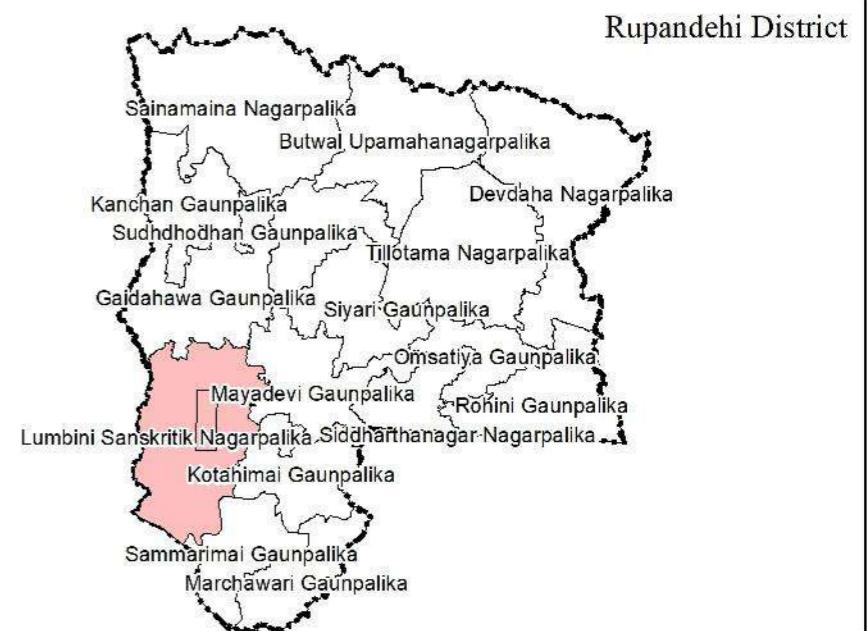
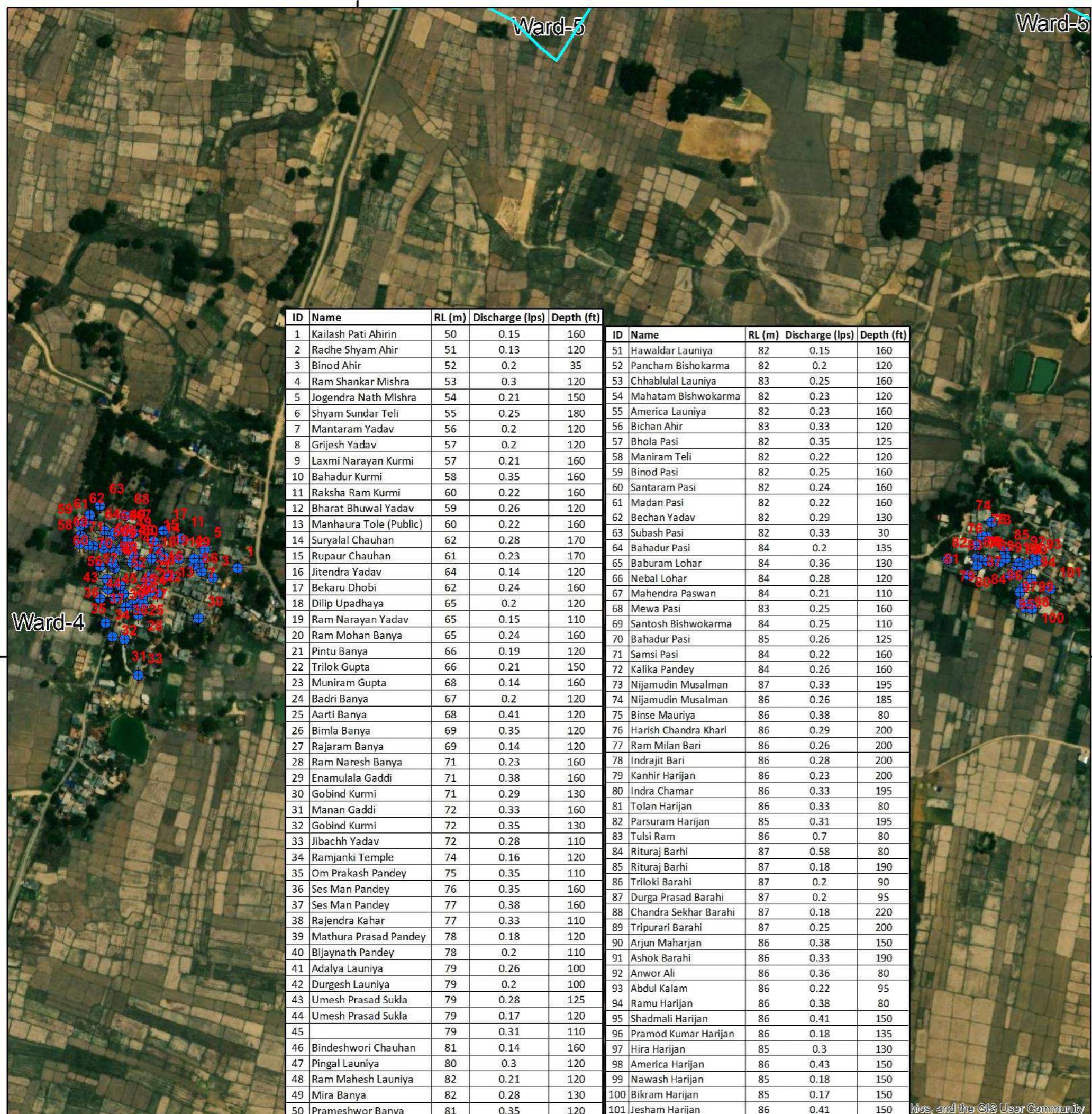
3

**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

- Groundwater
- Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:

Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source :

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:5,113

0 0.0425 0.085 0.17 0.255

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

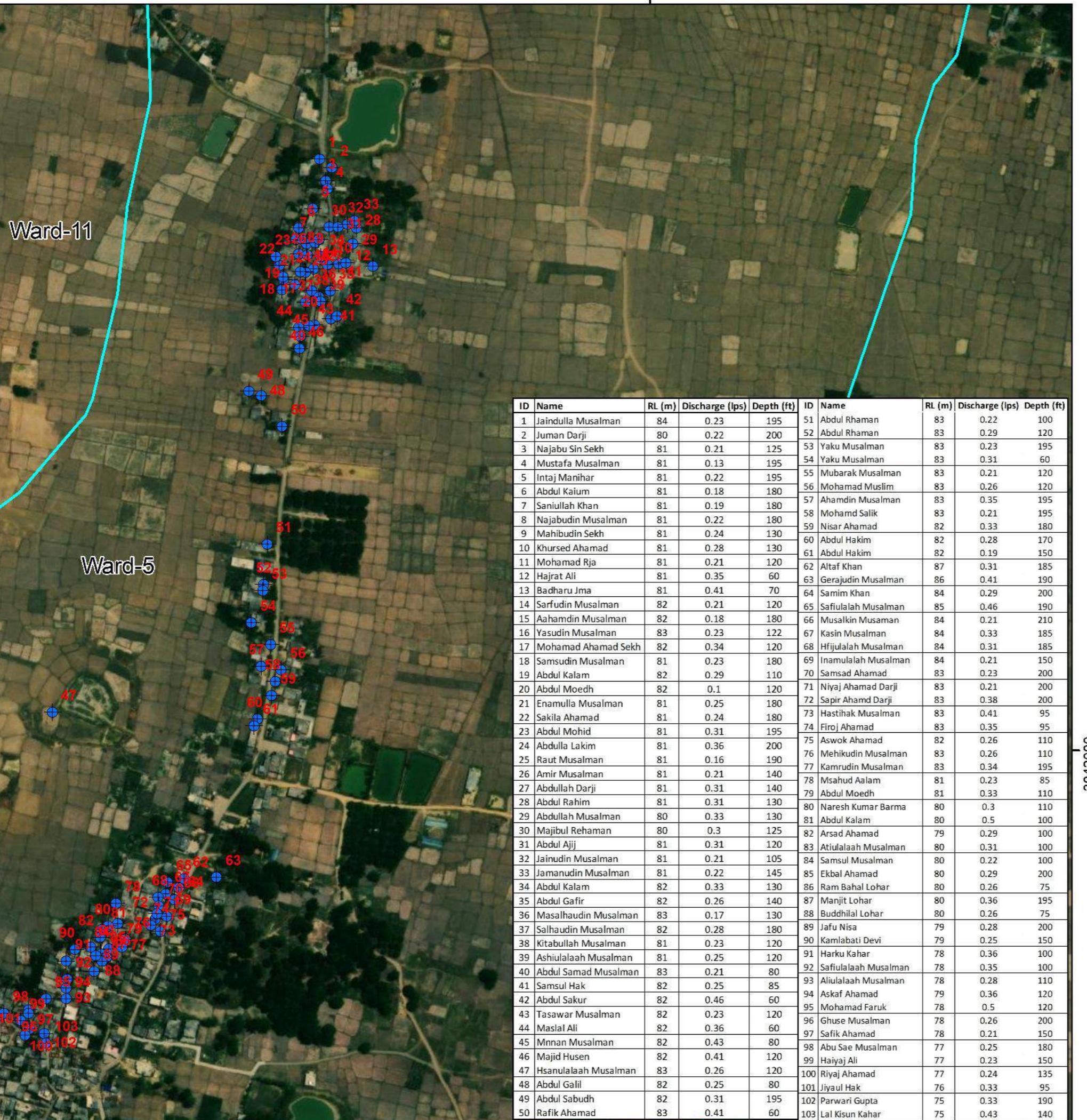
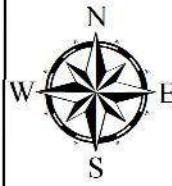
Latitude Of Origin: 0.0000

Units: Meter

Date :

MAP NO : M-3
SLIEET NO: 4

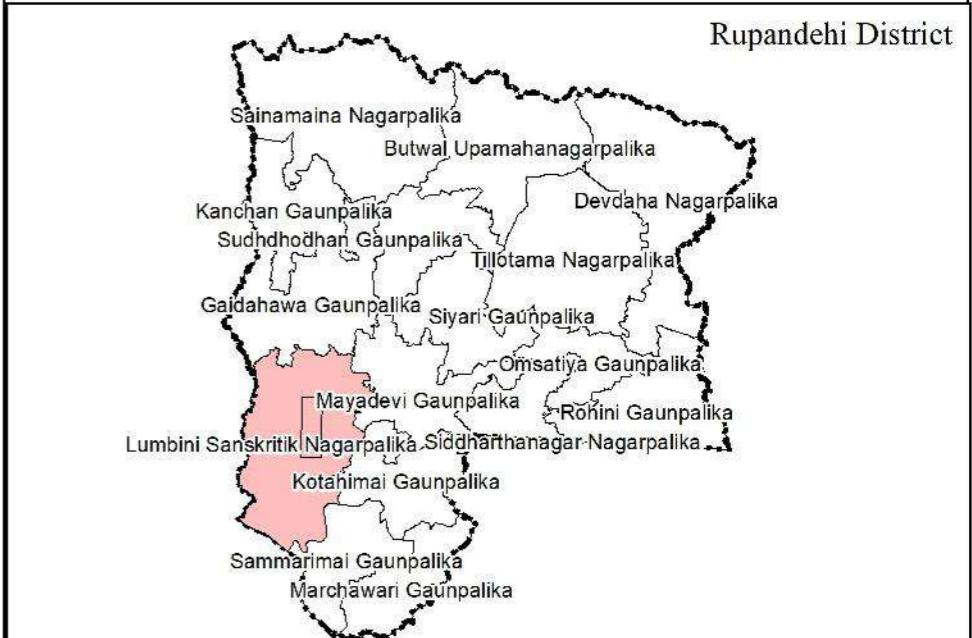
**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

Groundwater

Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:4,616

0 0.0375 0.075 0.15 0.225

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

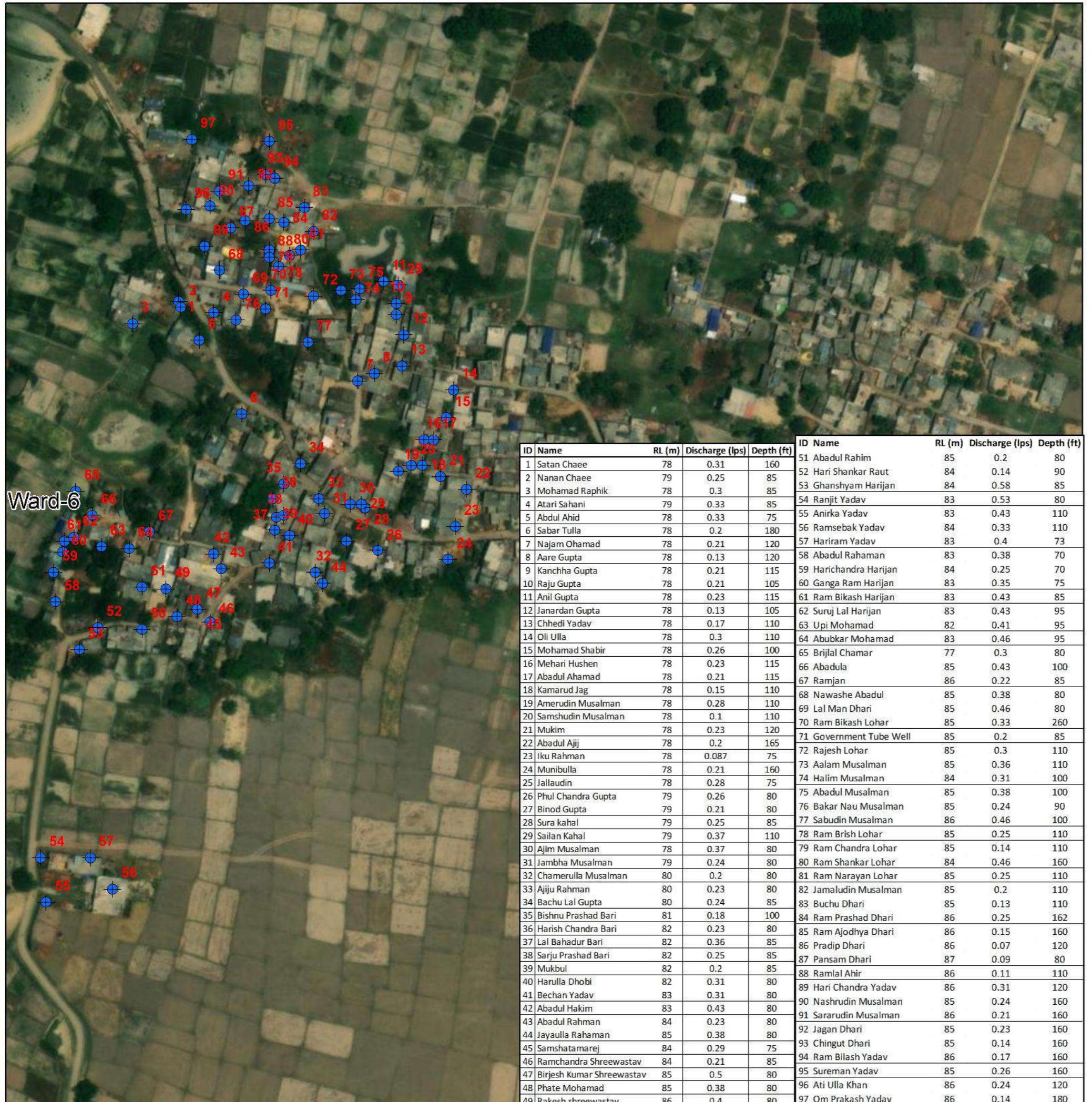
Latitude Of Origin: 0.0000

Units: Meter

Date :

MAP NO: M-3 **SLIEET NO:** 5

**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

Groundwater

Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:

Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source :

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:2,156

0 0.0175 0.035 0.07 0.105

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

MAP NO :

M-3

SHEET NO:

6

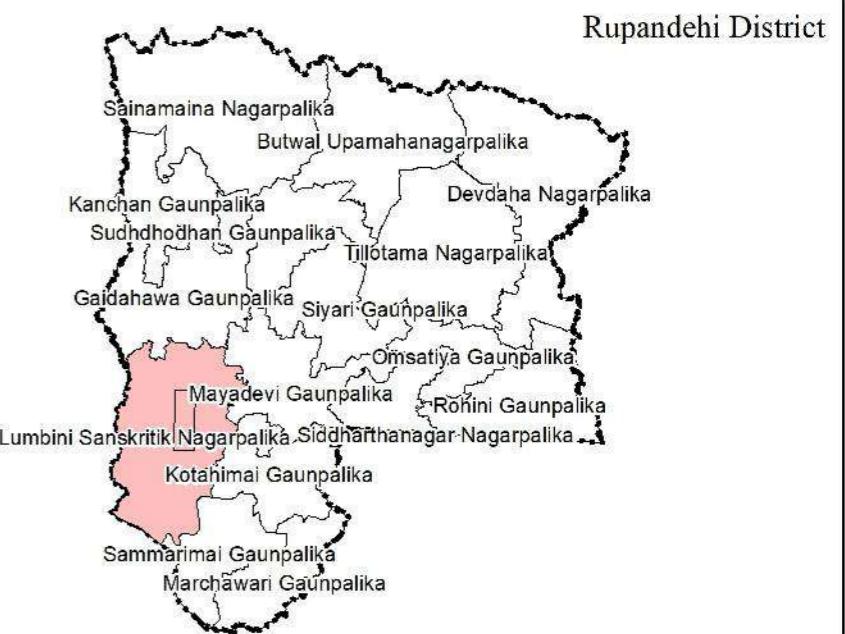
**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

Groundwater

Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source :

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:3,131

0 0.025 0.05 0.1 0.15

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

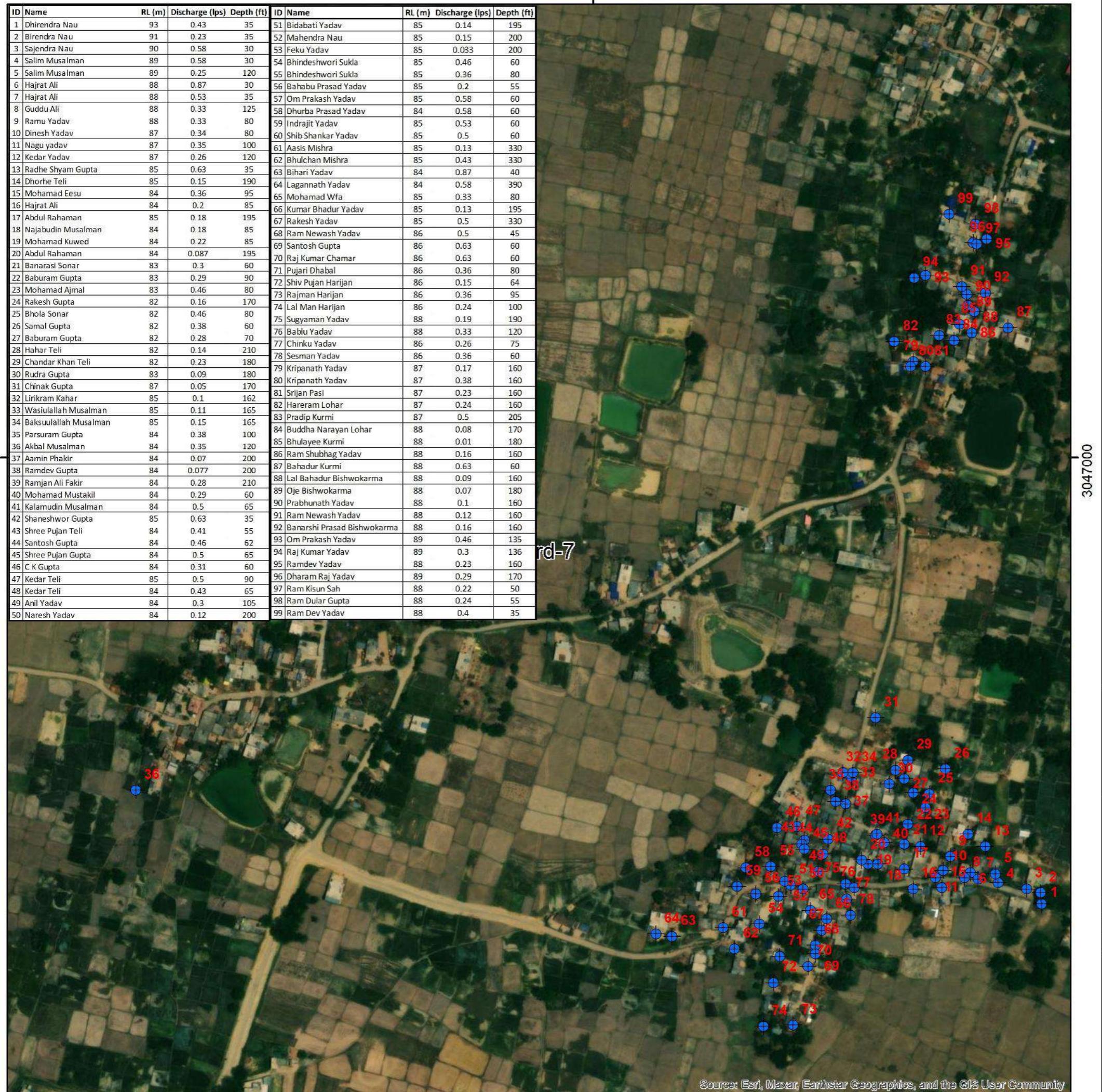
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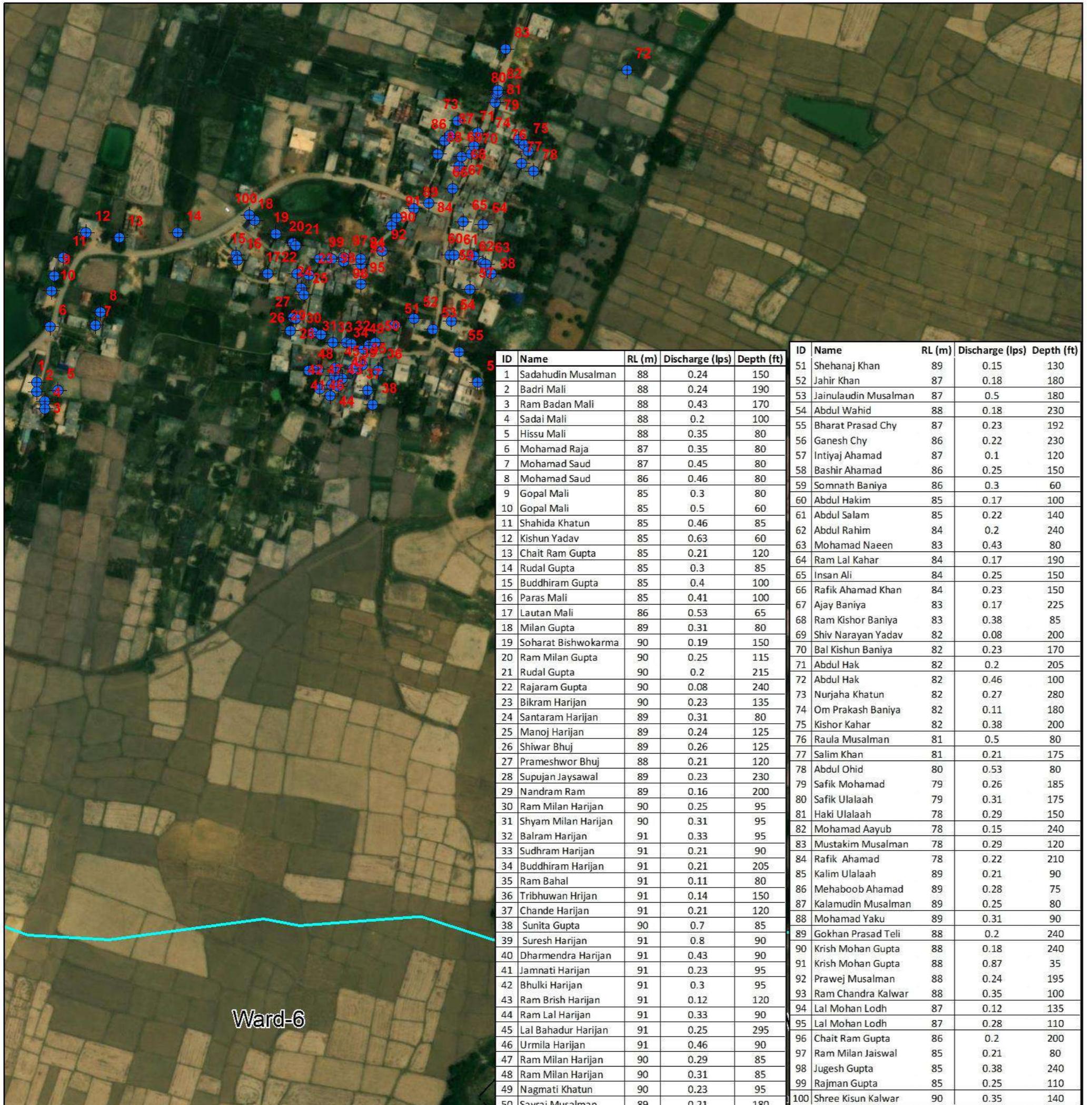
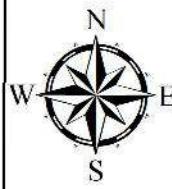
Date :

MAP NO : M-3

SLIEET NO: 7



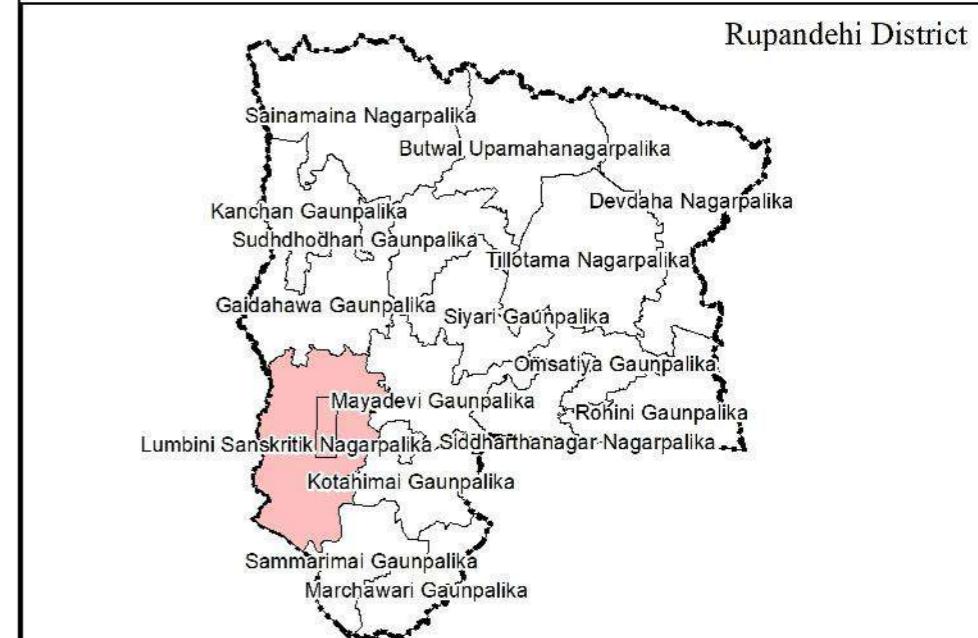
**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

Groundwater

Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source :

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:3,000

0 0.025 0.05 0.1 0.15

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

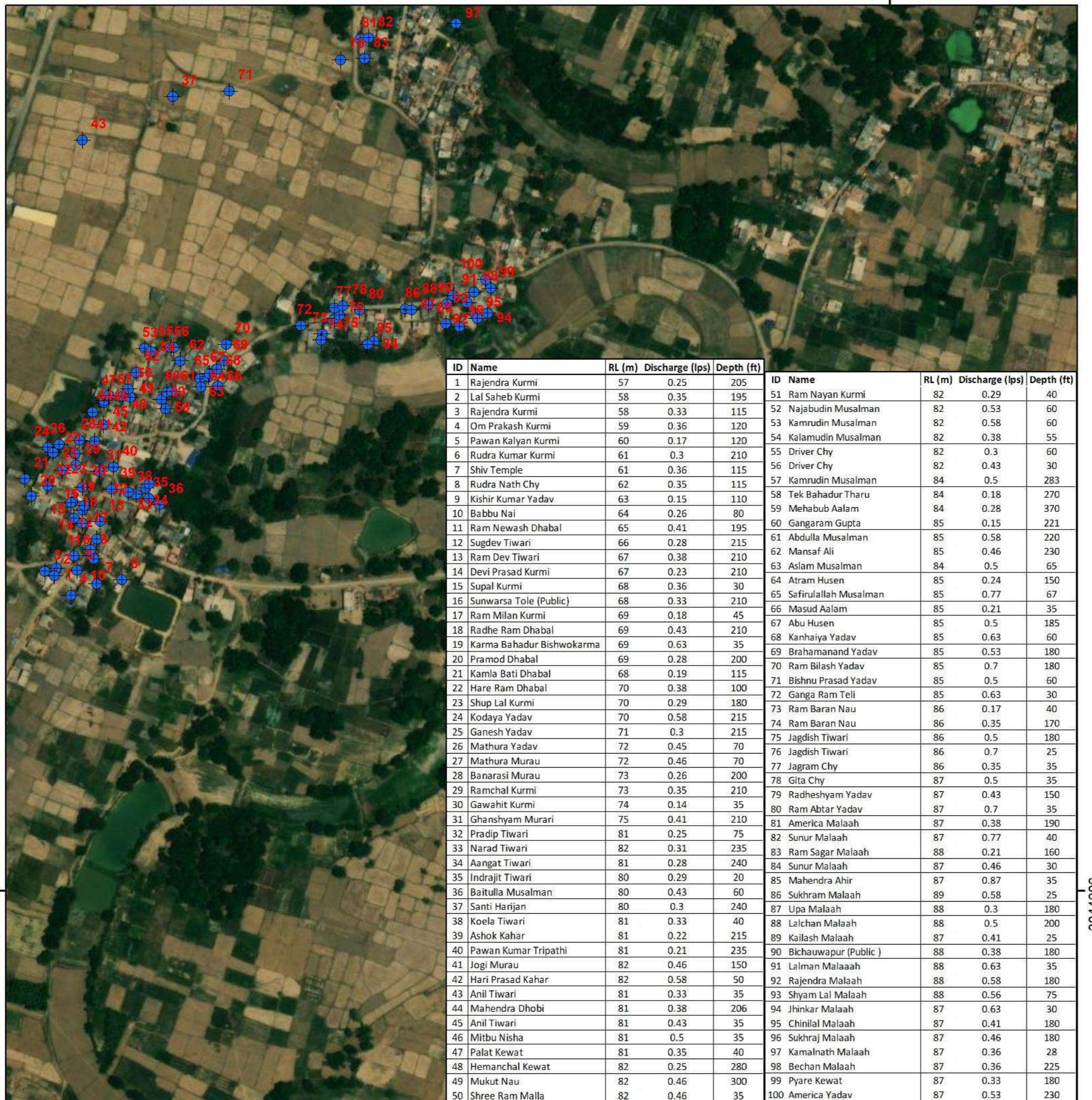
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Units: Meter

Date :

MAP NO :
M-3

SHEET NO:
8



SATELLITE MAP OF GROUNDWATER POINTS LUMBINI SANSKRITIK NAGARPALIKA



Legend

Groundwater

Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:3,800

0 0.03 0.06 0.12 0.18

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

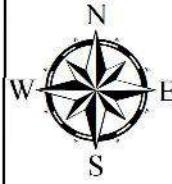
MAP NO :

M-3

SHEET NO:

9

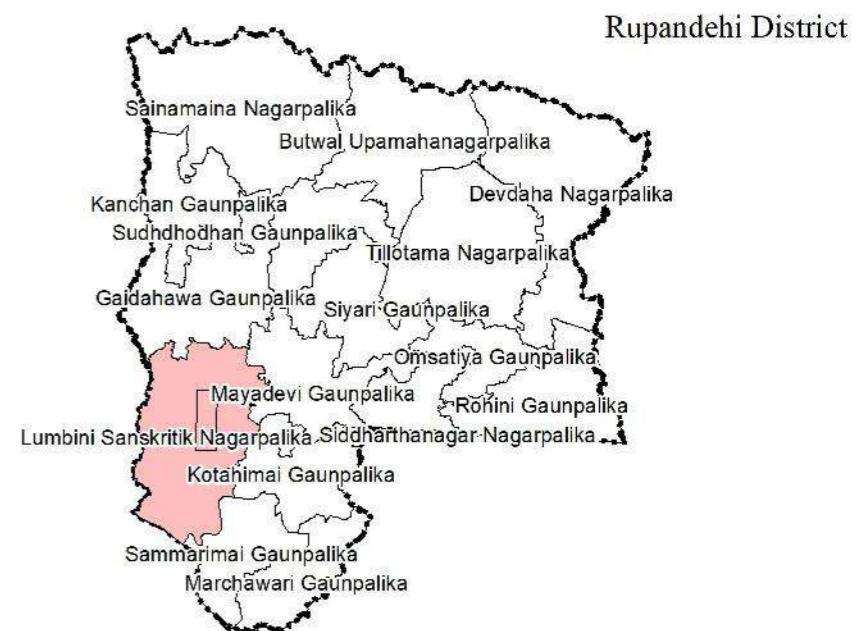
**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

Groundwater

Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source :

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:4,126

0 0.0325 0.065 0.13 0.195

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

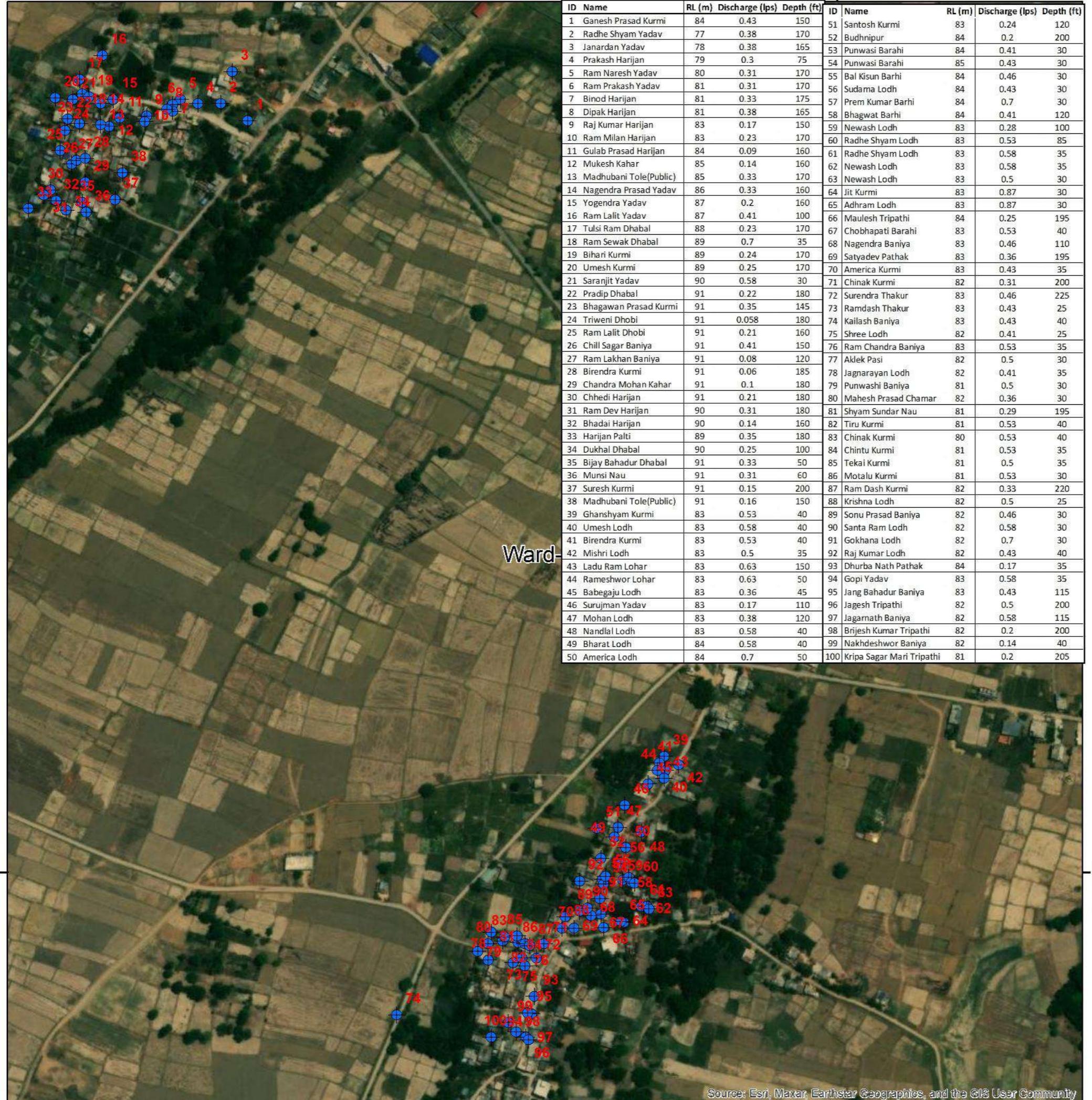
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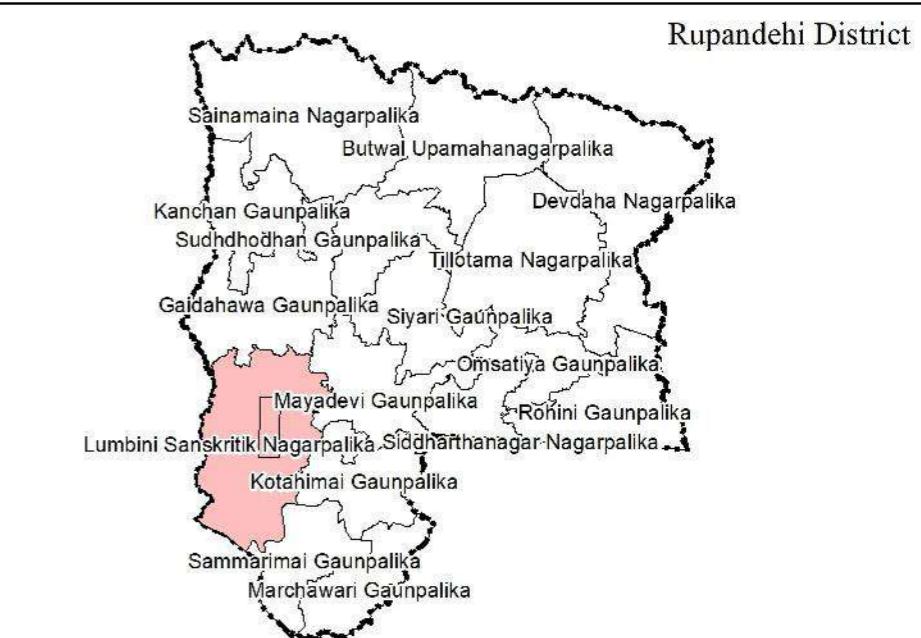
Date :

MAP NO :
M-3

SHEET NO:
10



**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:2,550

0 0.02 0.04 0.08 0.12
Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

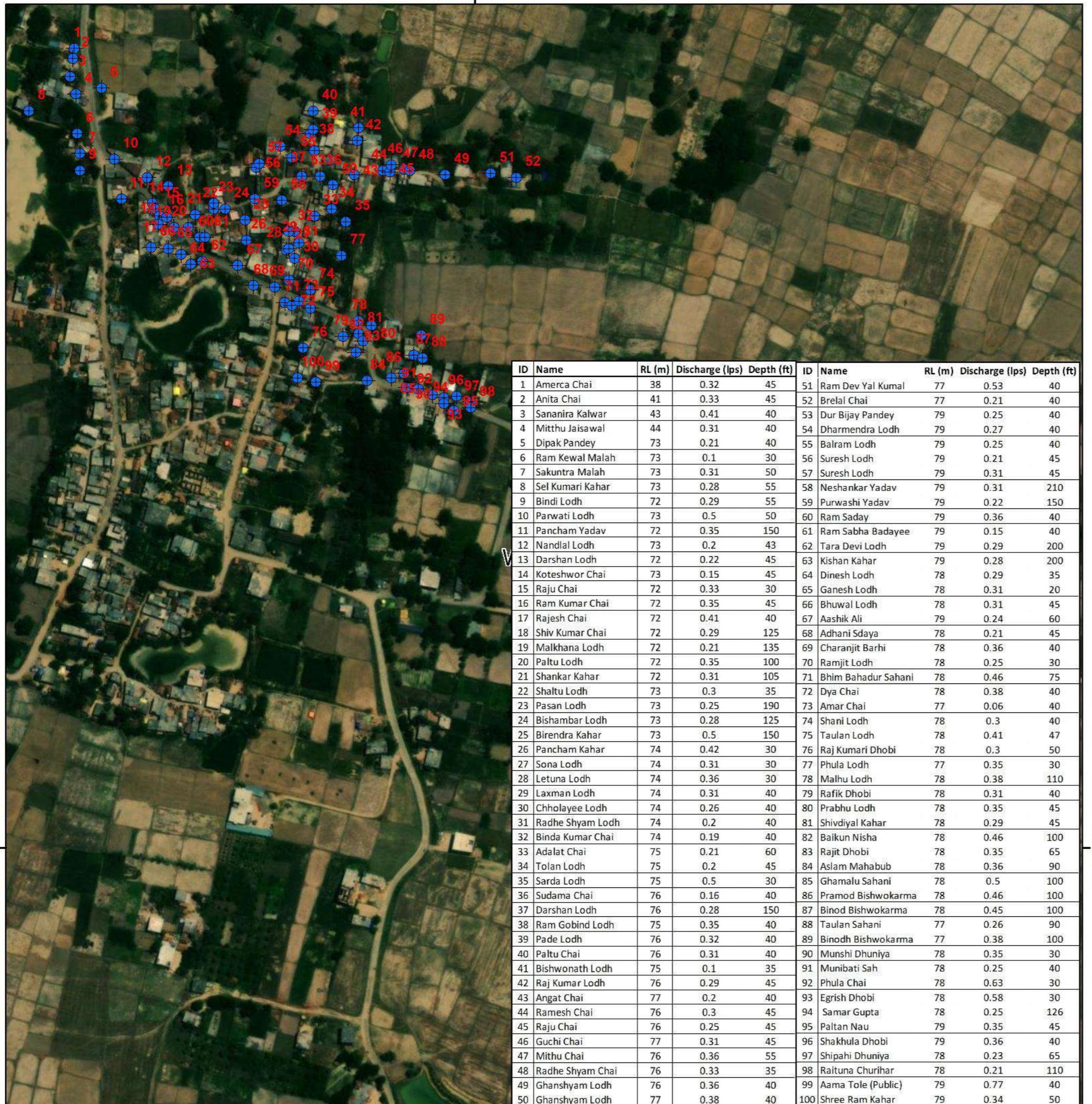
MAP NO :

SHEET NO:

M-3

11

**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

Groundwater

Ward Boundary

Rupandehi District



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:2,800

0 0.0225 0.045 0.09 0.135

Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

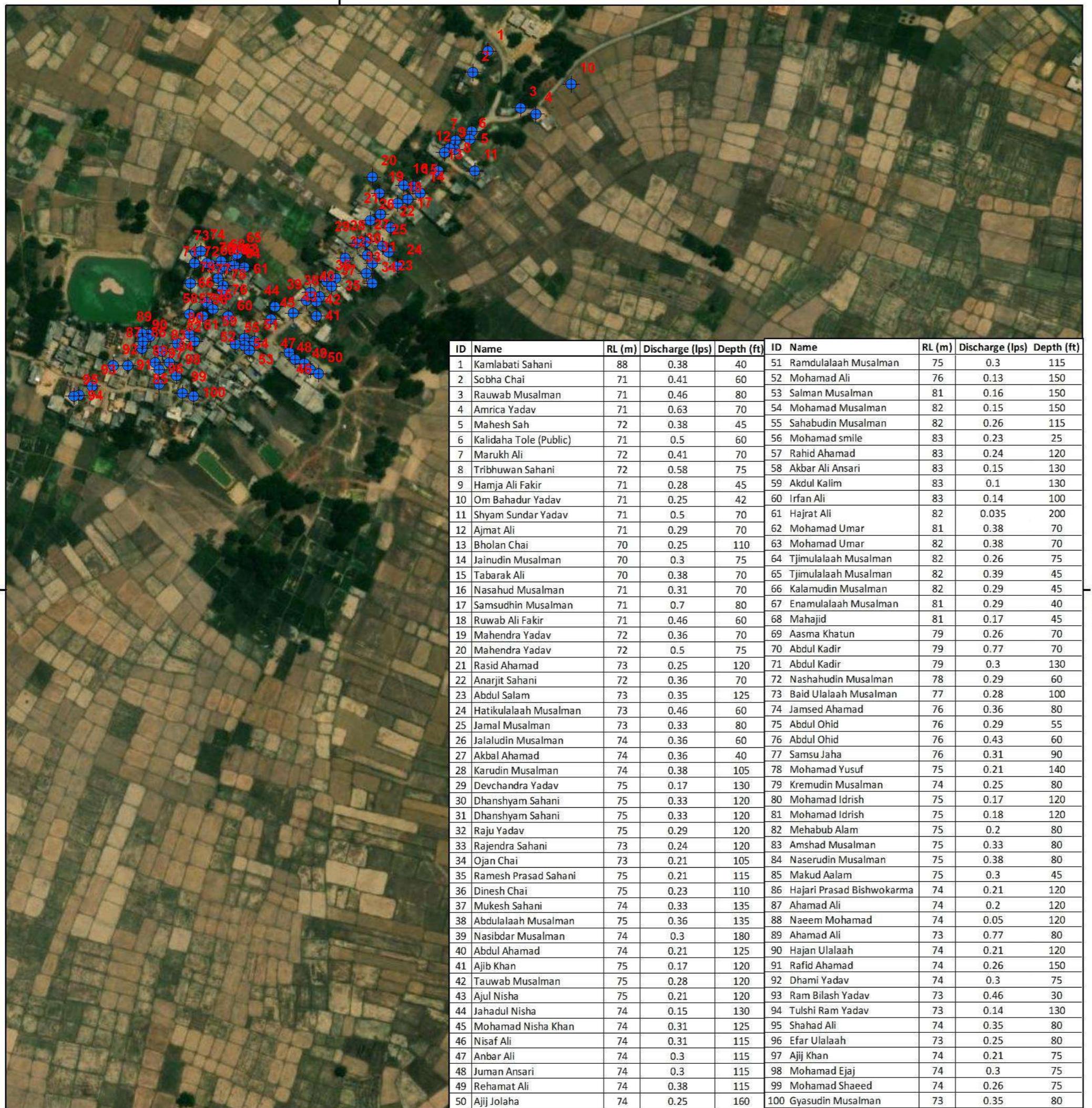
MAP NO :

SHEET NO:

12

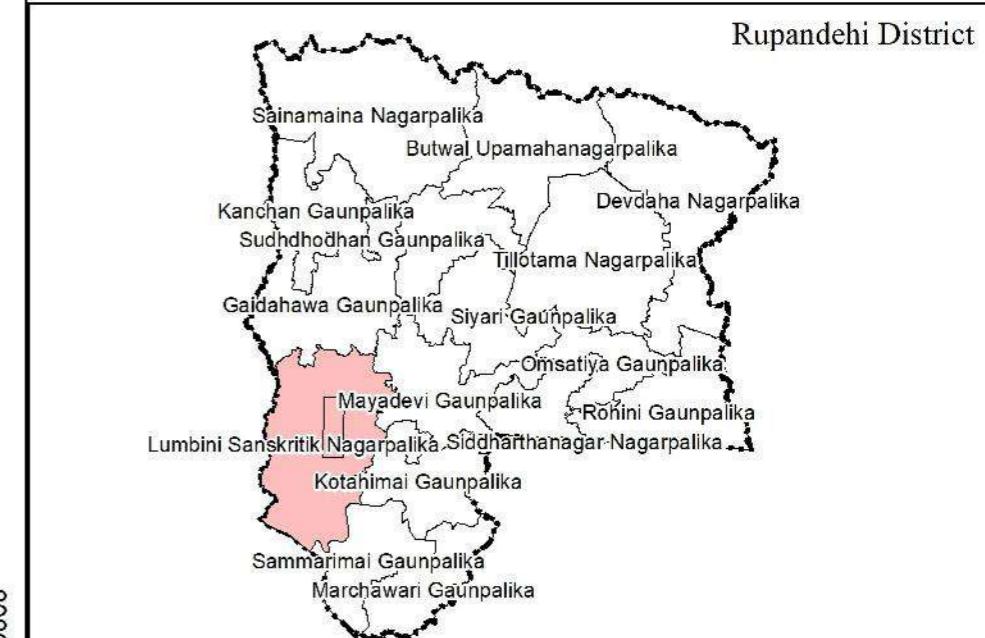
M-3

**SATELLITE MAP OF
GROUNDWATER POINTS
LUMBINI SANSKRITIK
NAGARPALIKA**



Legend

- Groundwater
- Municipal Boundary
- Ward Boundary



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source :

Municipality/Ward Office, Field Survey, MoFAGA, Department of Survey, Satellite Imagery

Scale 1:3,919

0 0.0325 0.065 0.13 0.195 Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

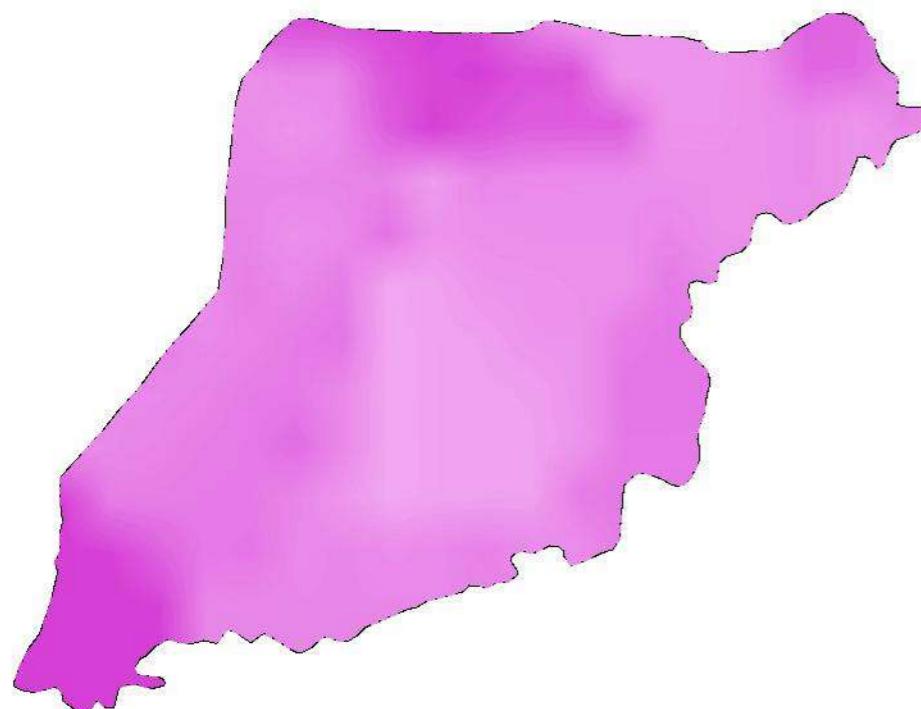
MAP NO :
M-3

SHEET NO:
13

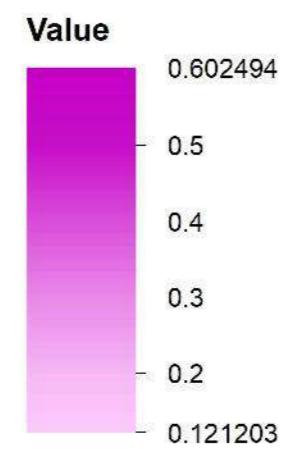
**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



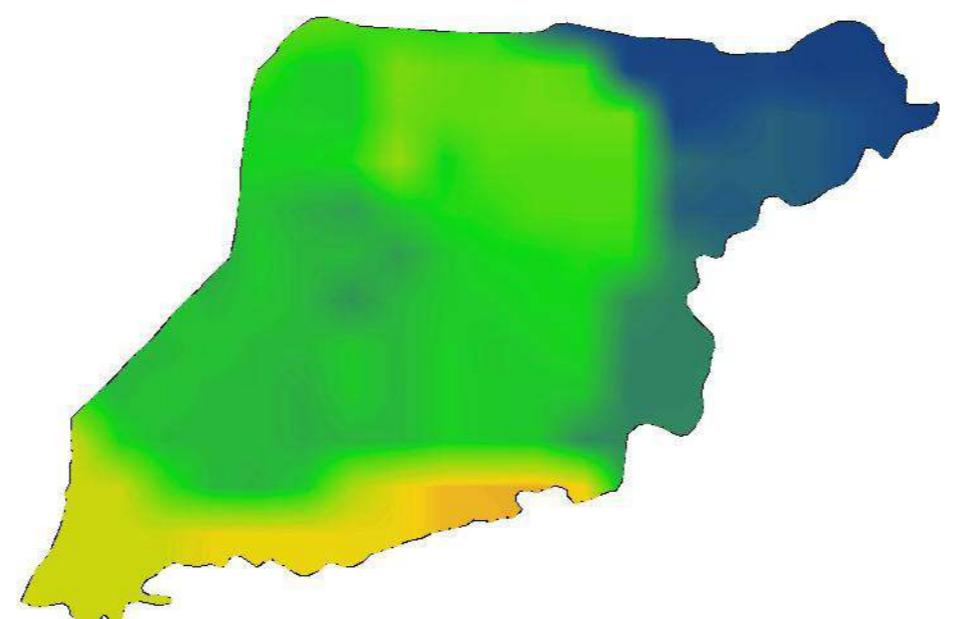
Based on Discharge (lps)



Discharge

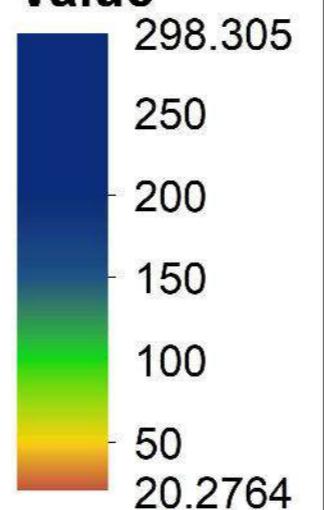


Based on Water Depth (ft)

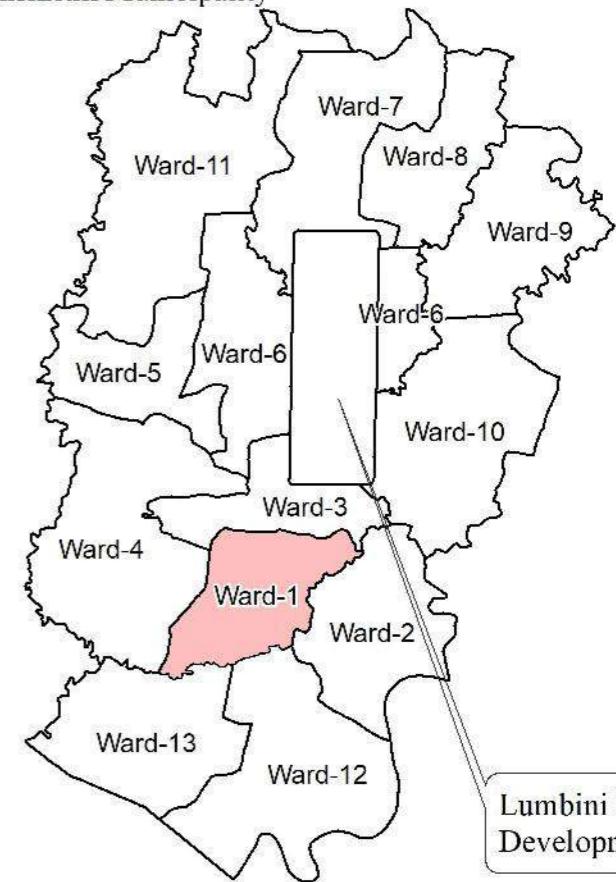


Depth

Value



Lumbini Sanskritik Municipality



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:31,549



Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

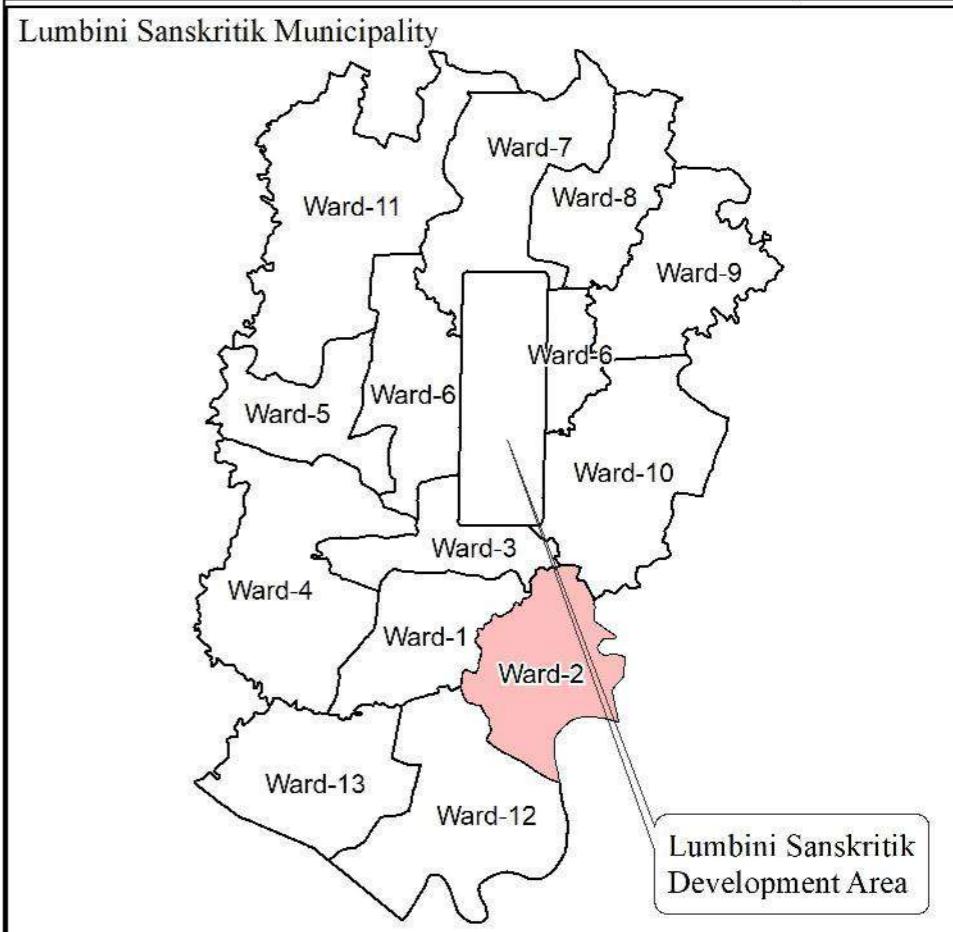
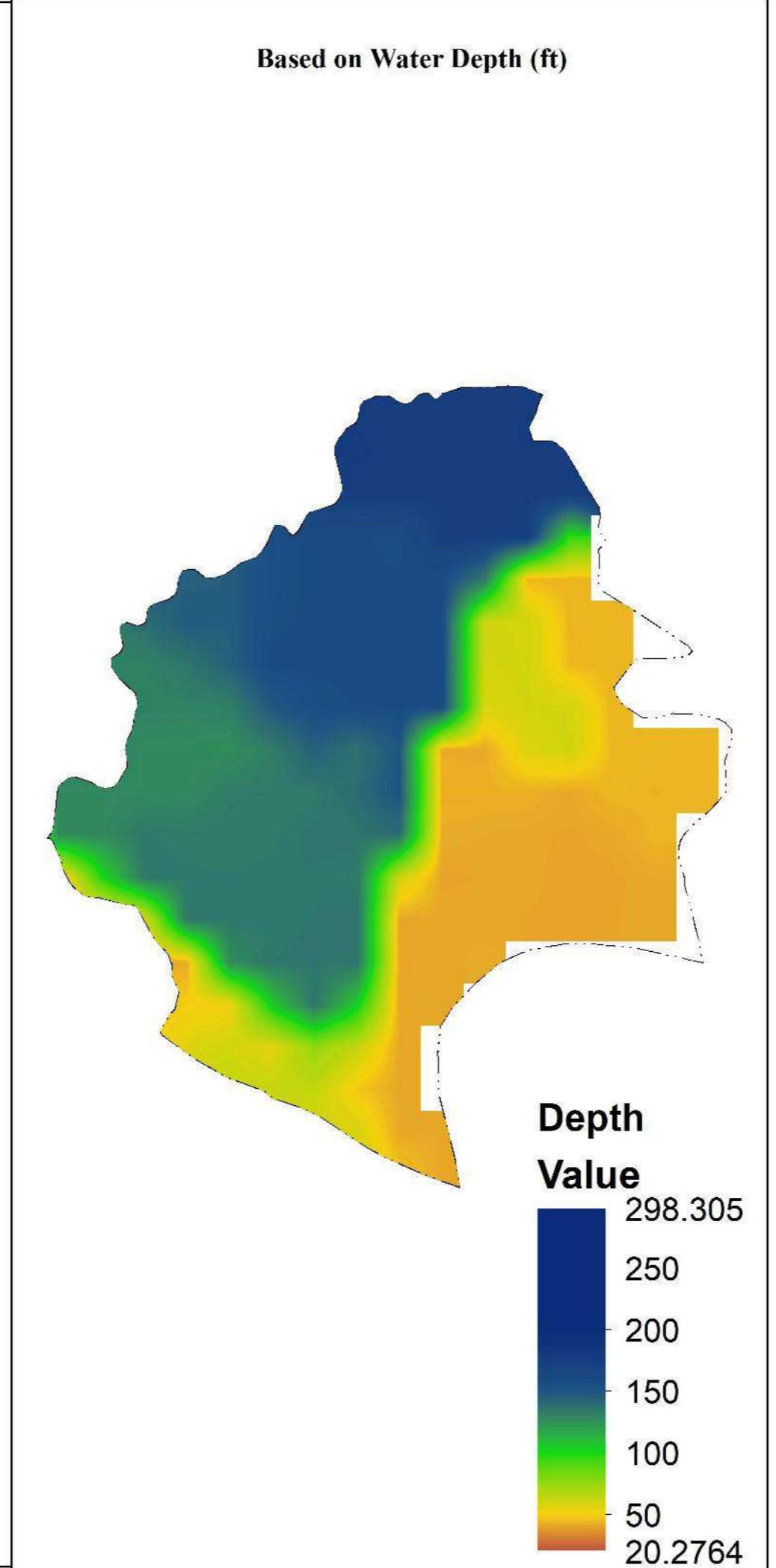
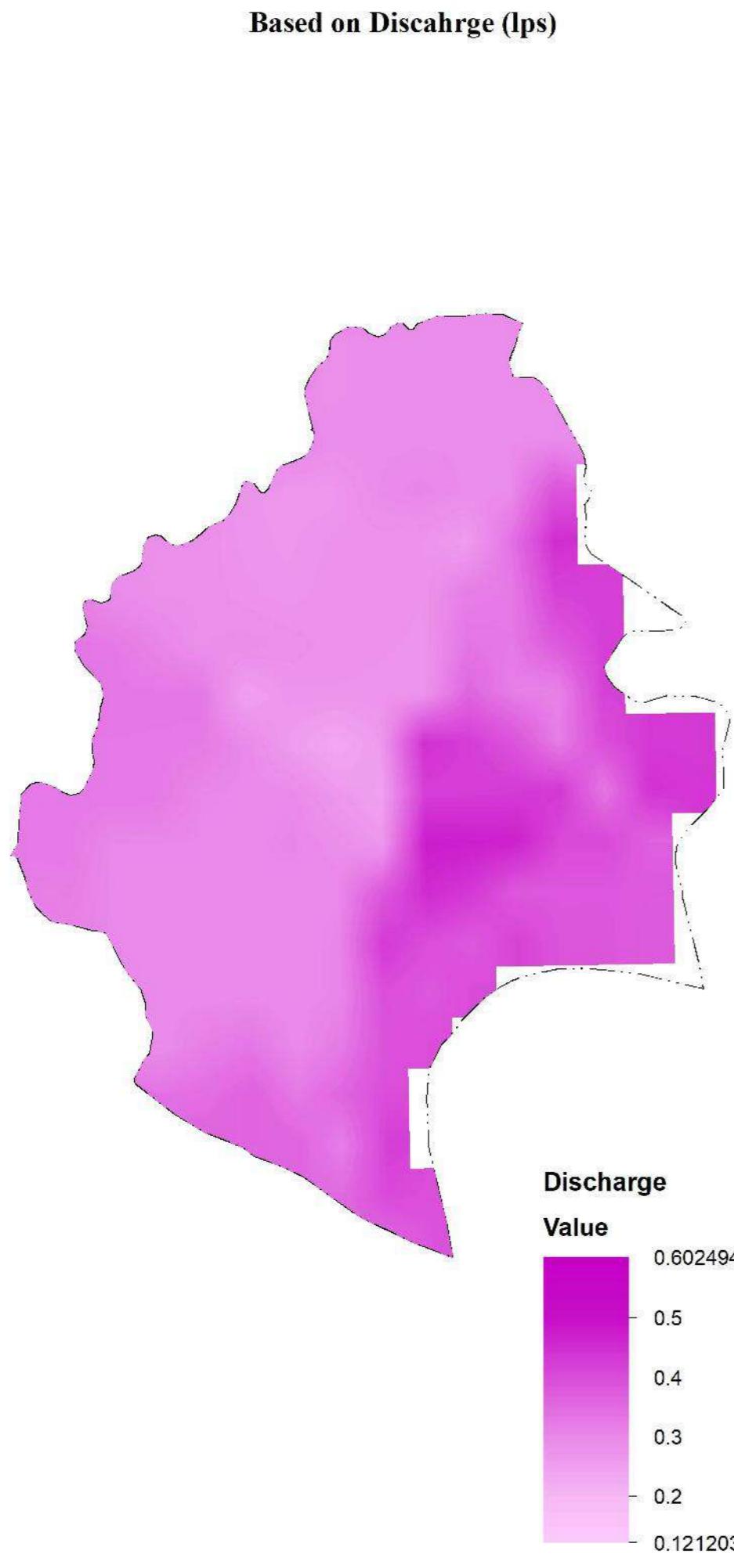
Units: Meter

Date :

MAP NO :
M-4

SHEET NO:
1

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

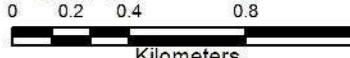
Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:25,973



Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

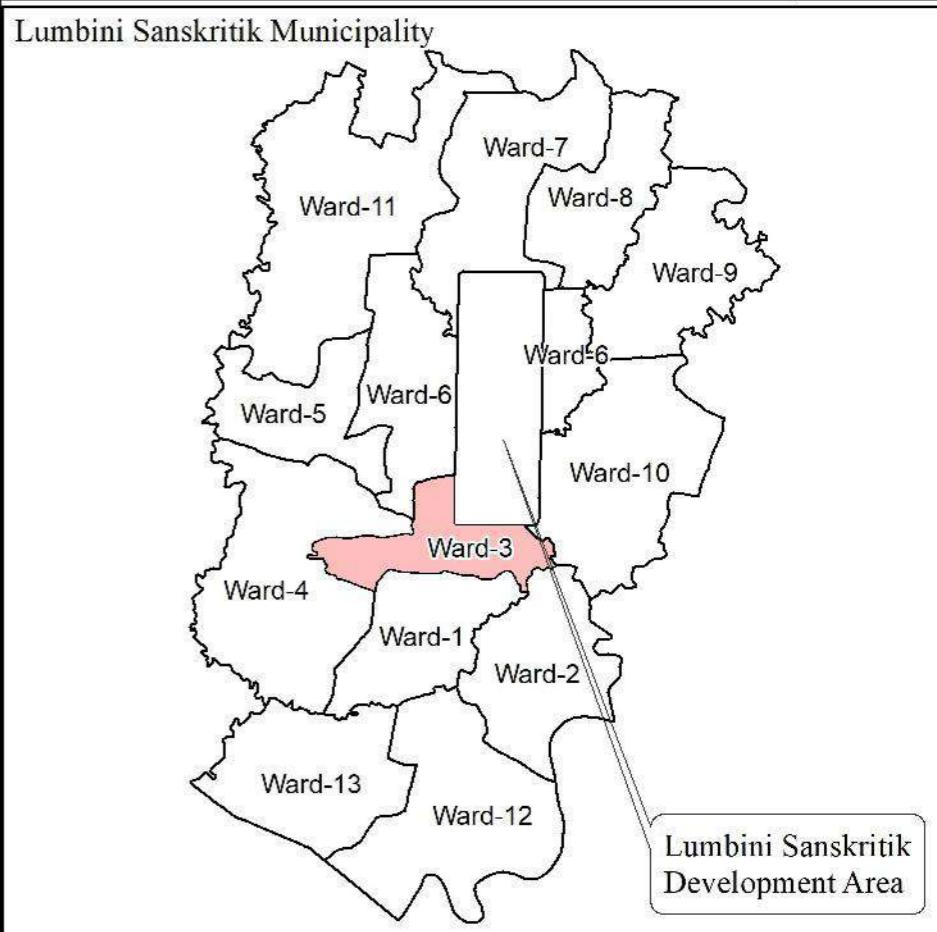
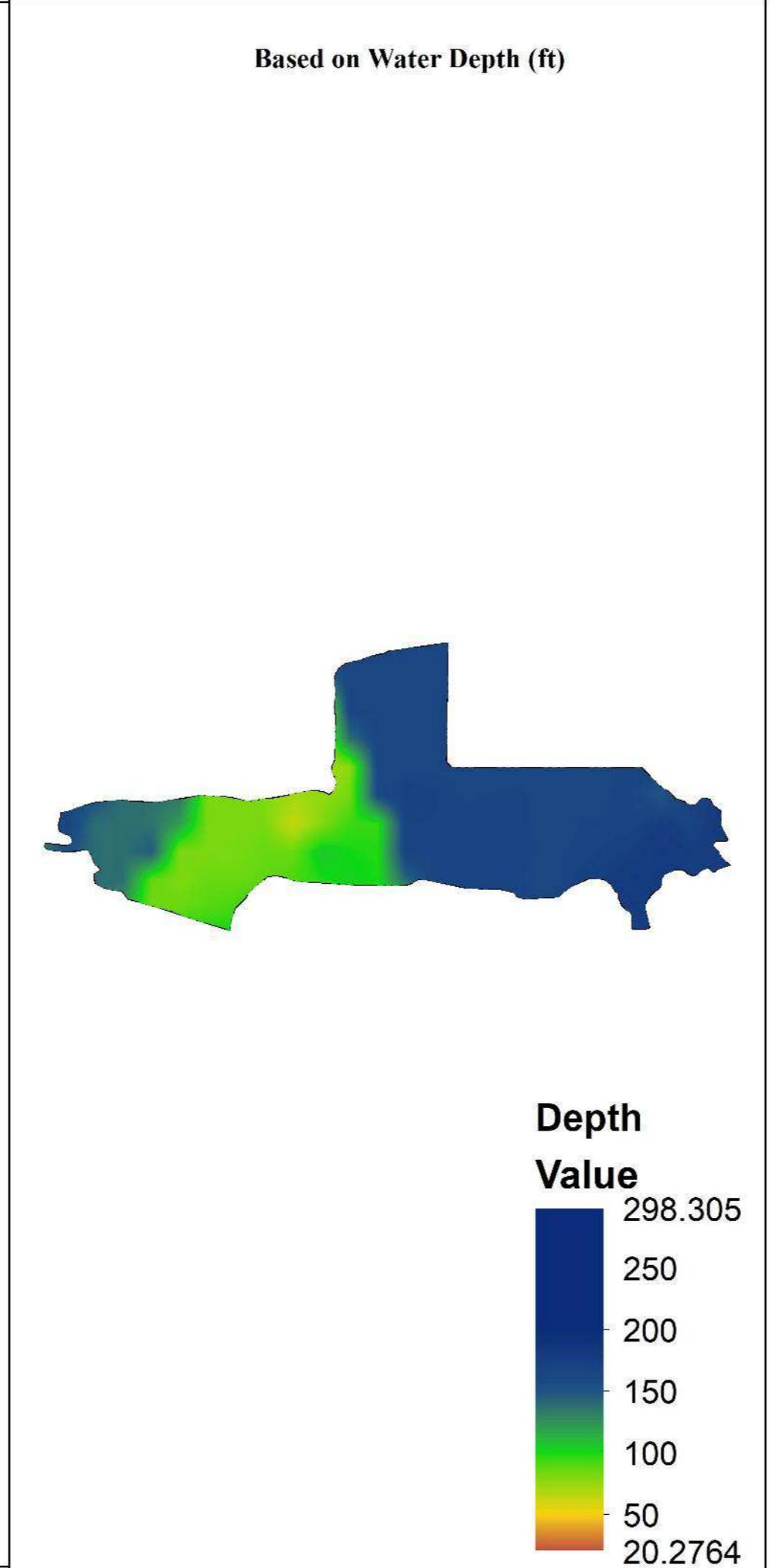
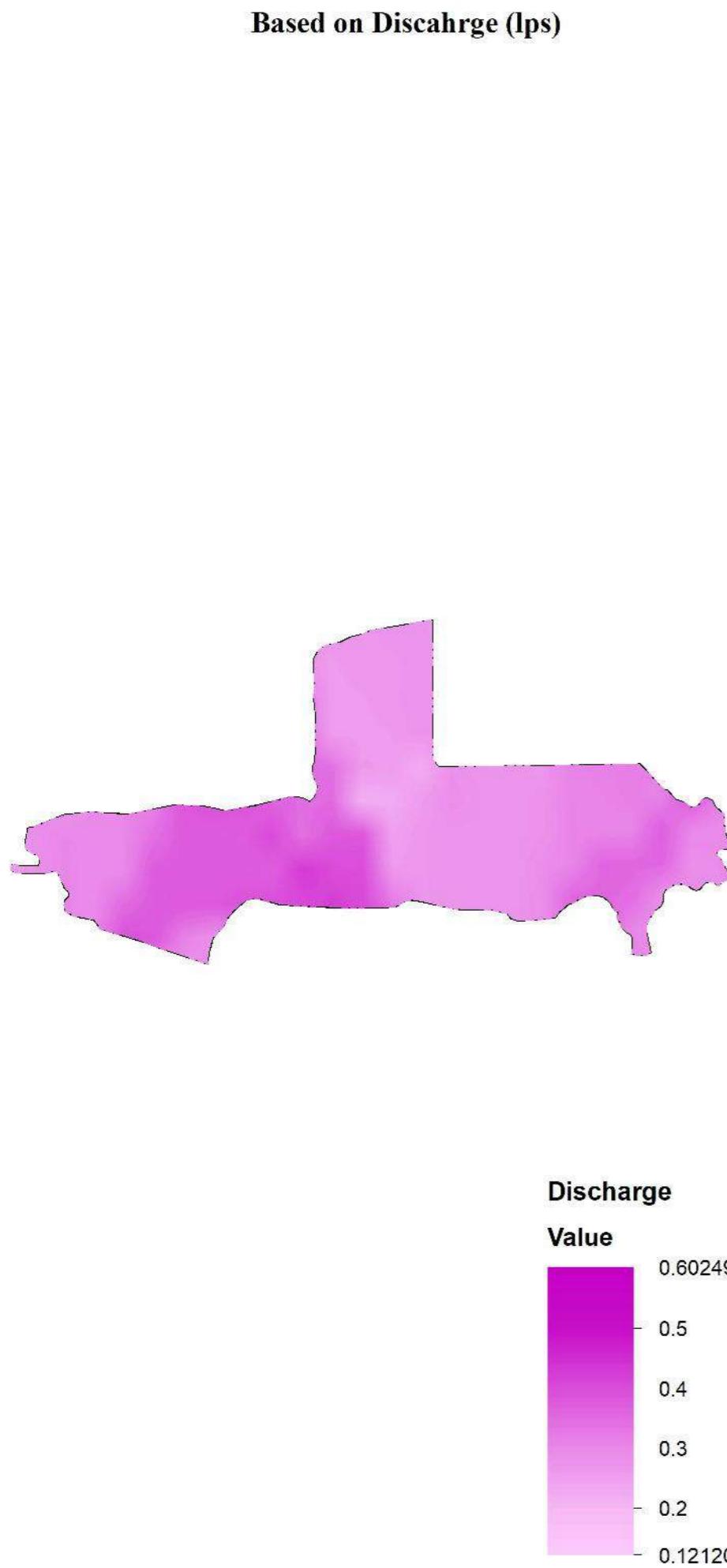
Units: Meter

Date :

MAP NO :
M-4

SHEET NO:
2

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:39,145

0 0.325 0.65 1.3 1.95
Kilometers

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

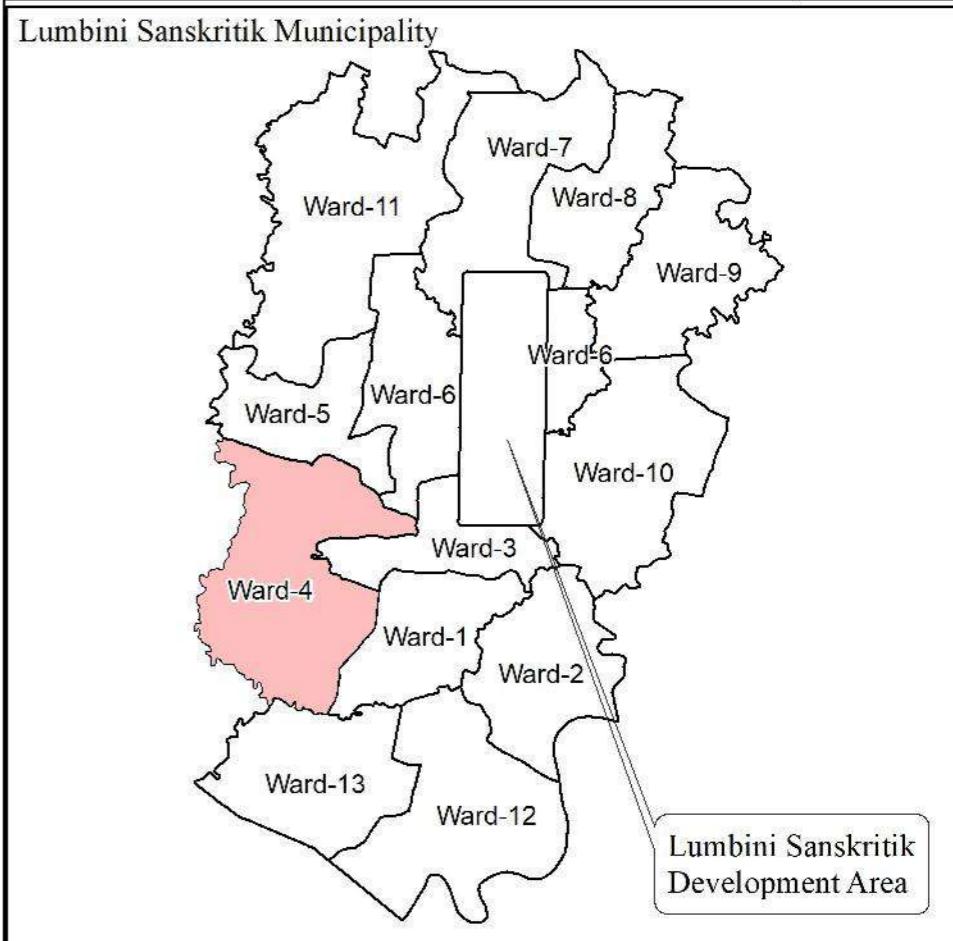
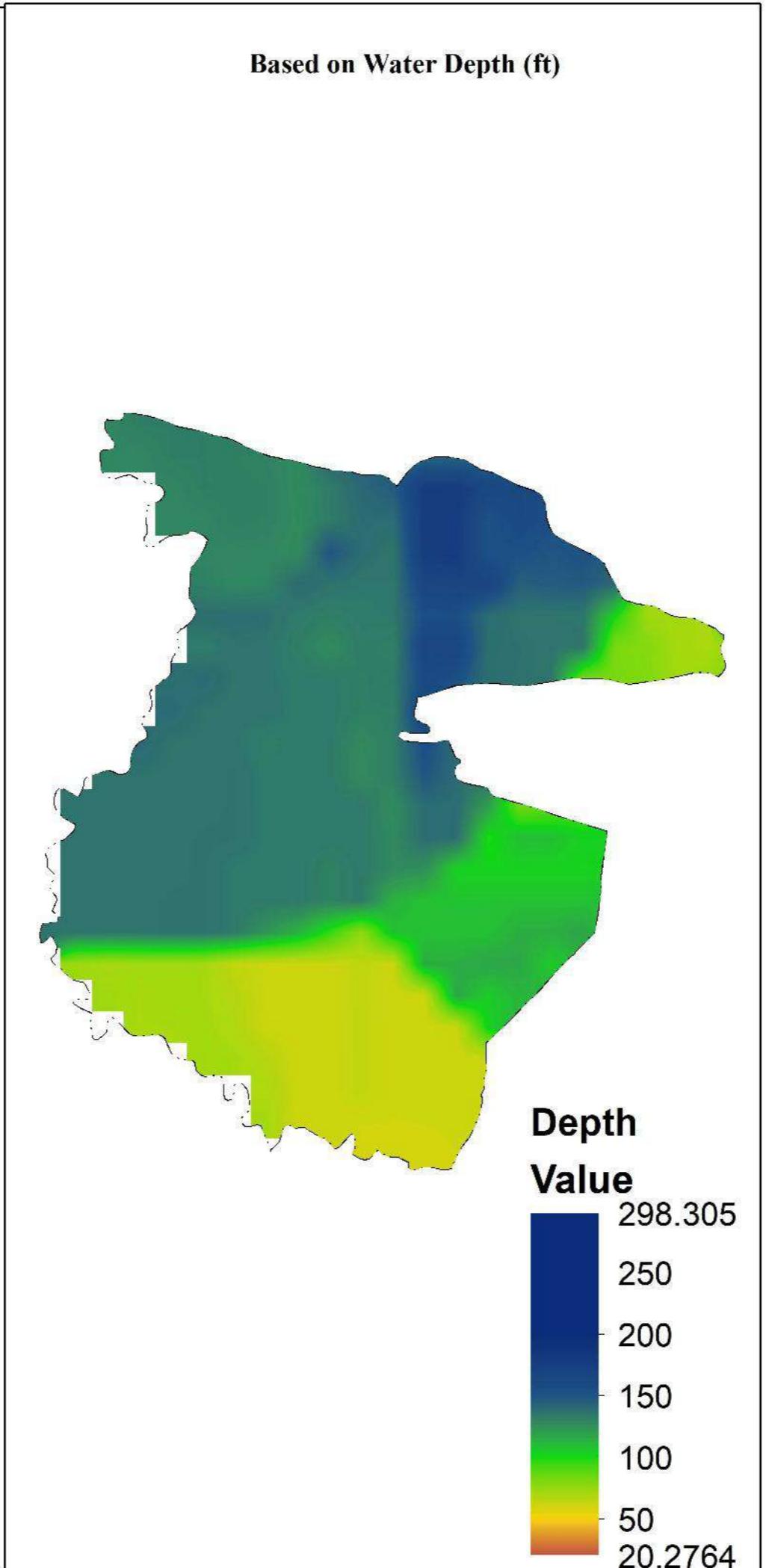
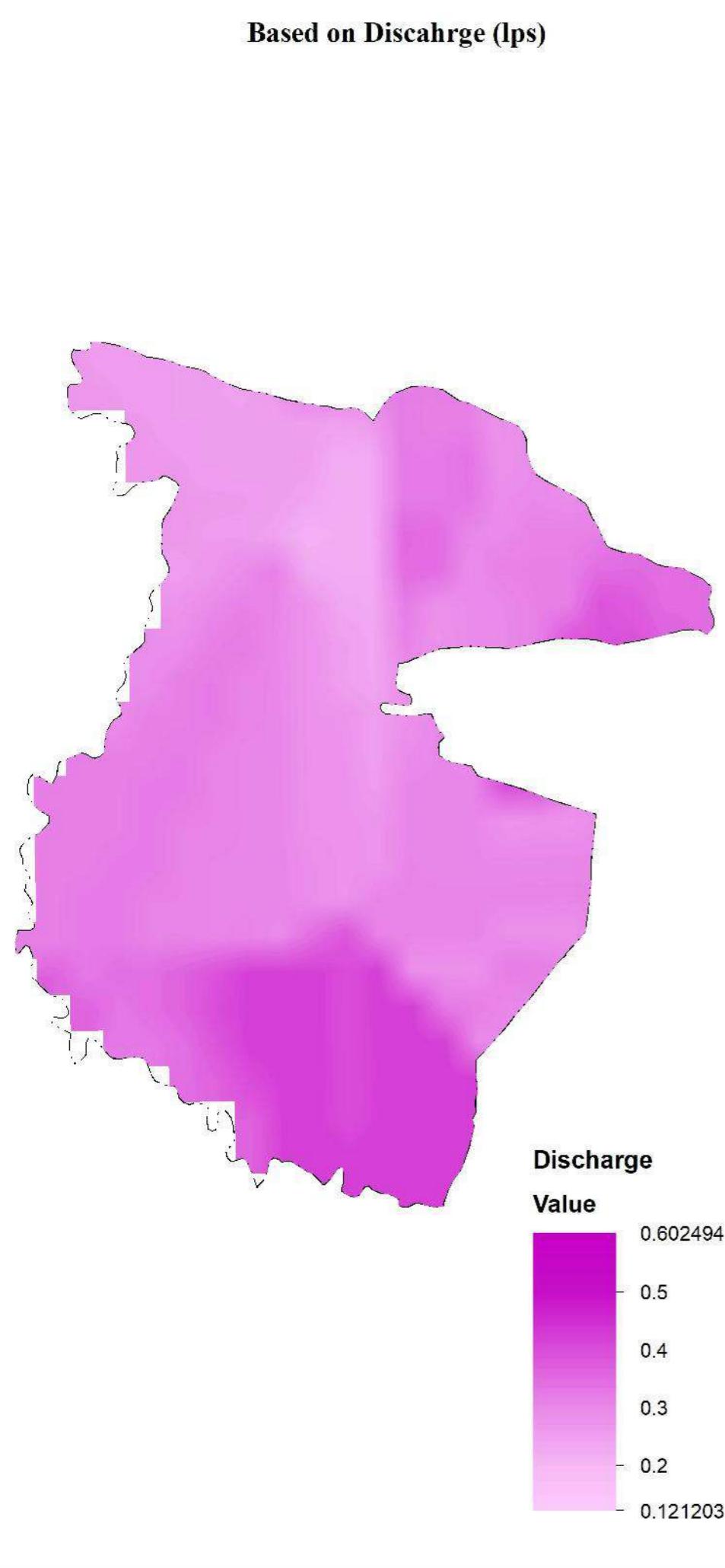
Units: Meter

Date :

MAP NO :
M-4

SHEET NO:
3

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:34,656

0	0.275	0.55	1.1	1.65
Kilometers				

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

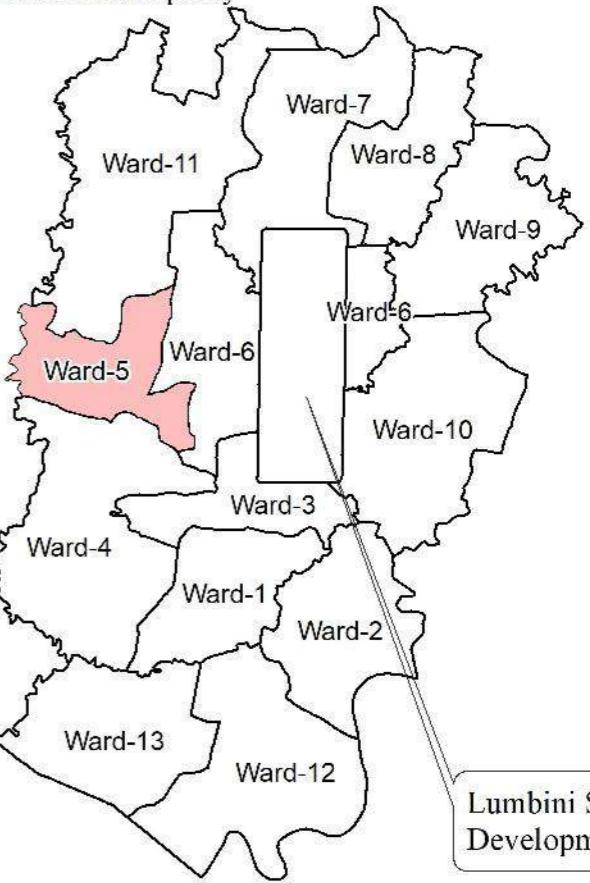
MAP NO :
M-4

SHEET NO:
4

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



Lumbini Sanskritik Municipality



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

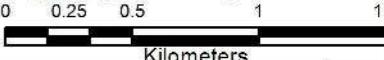
Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:29,885



Coordinate System: Modified UTM 84
Projection: Transverse Mercator

Date :

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

MAP NO :

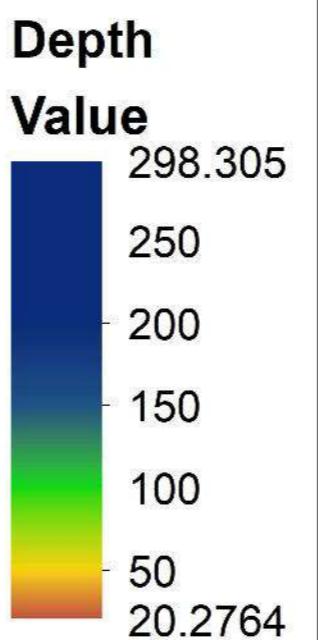
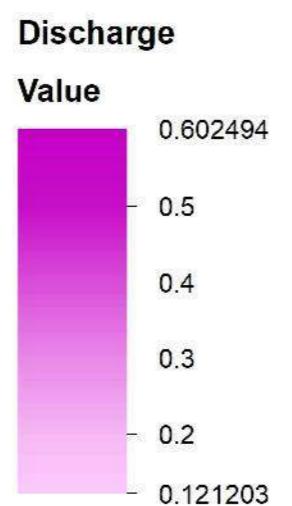
M-4

SHEET NO:

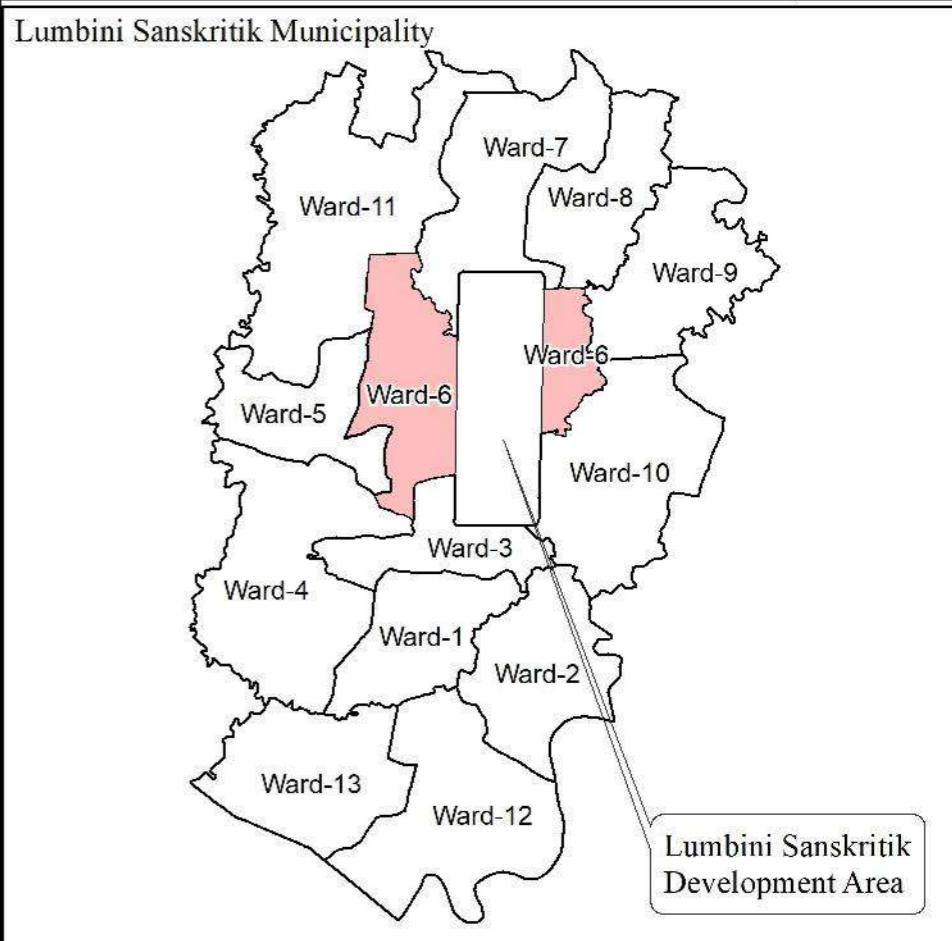
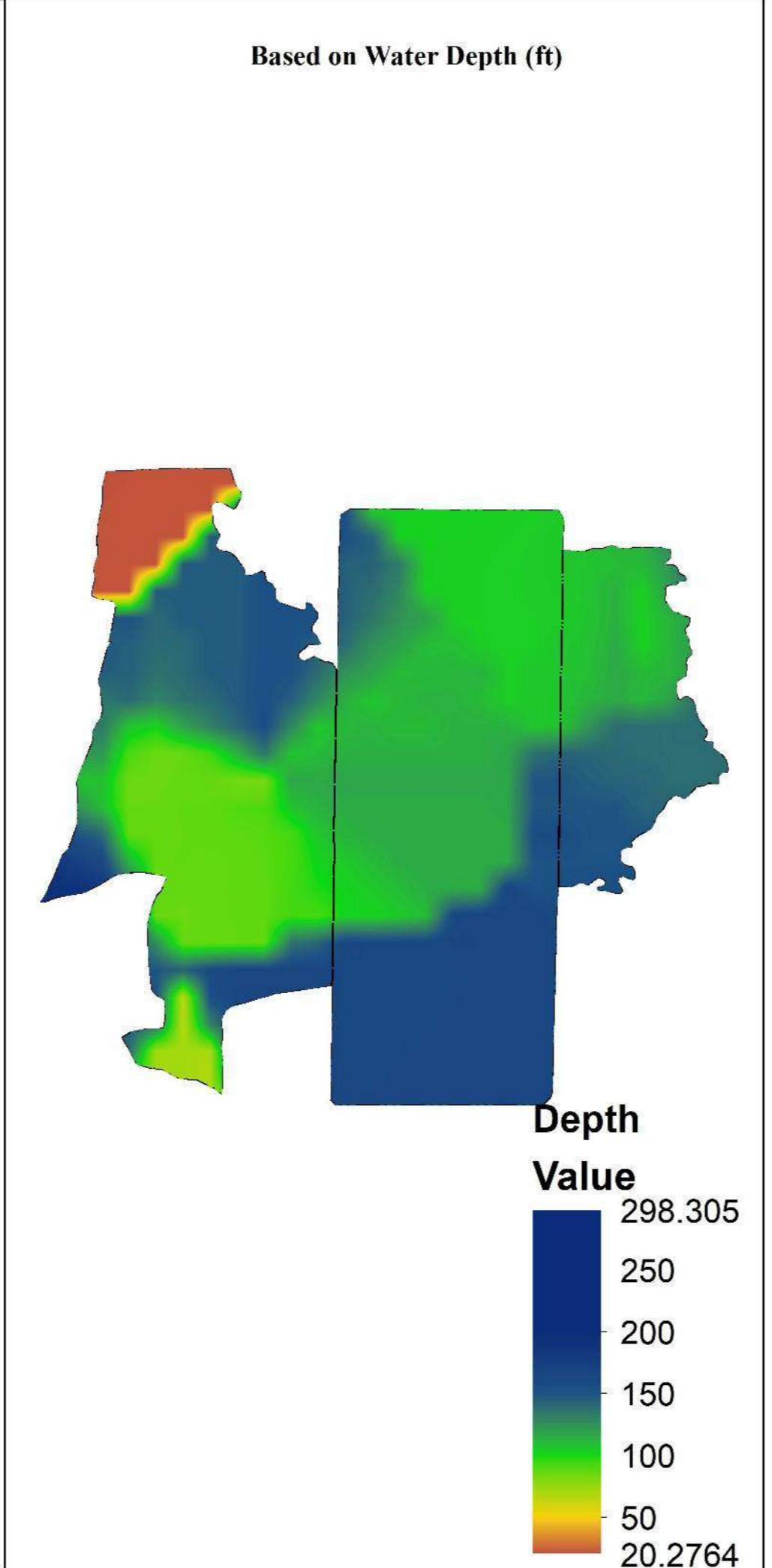
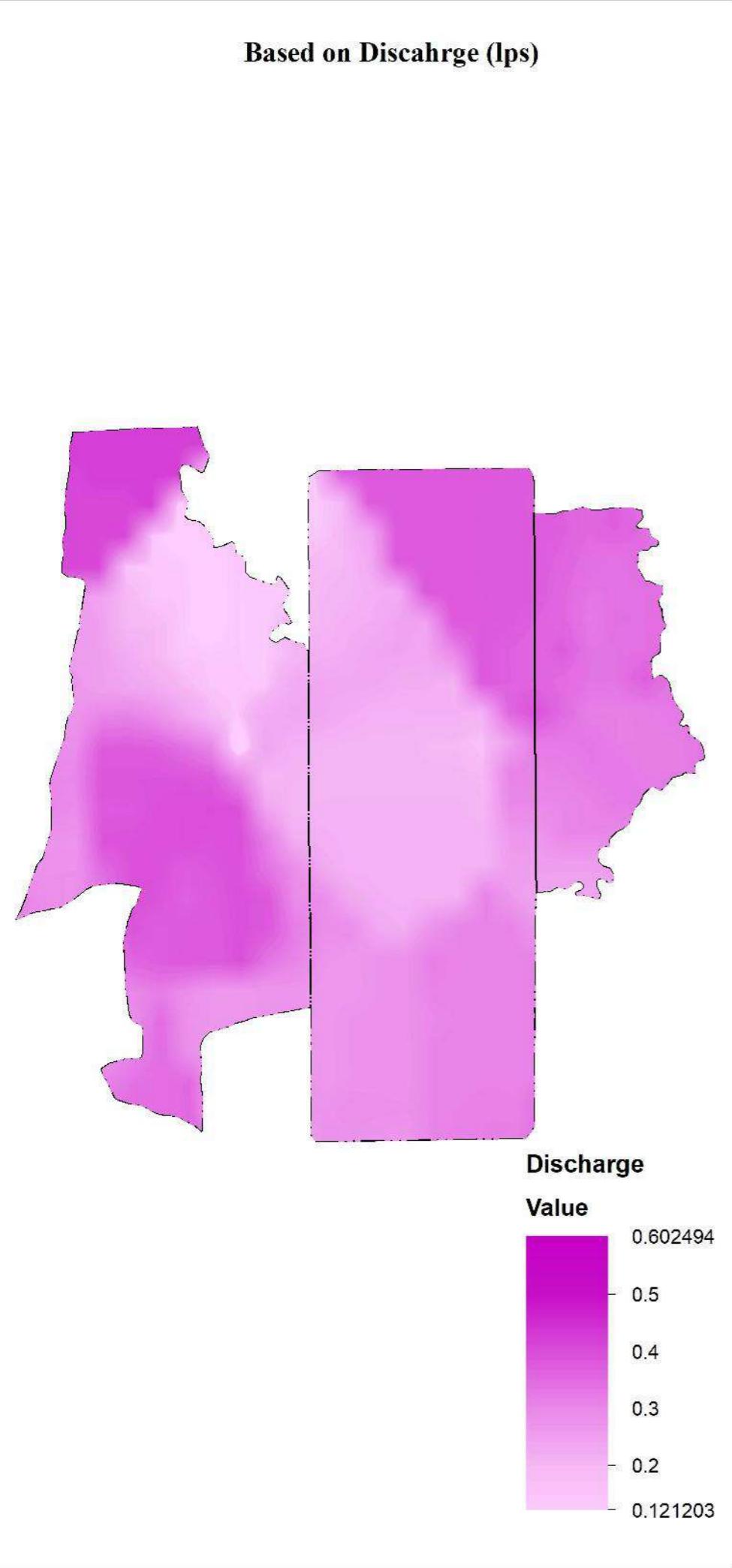
5

Based on Discharge (lps)

Based on Water Depth (ft)



**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:
Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:

Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:
Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:
Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

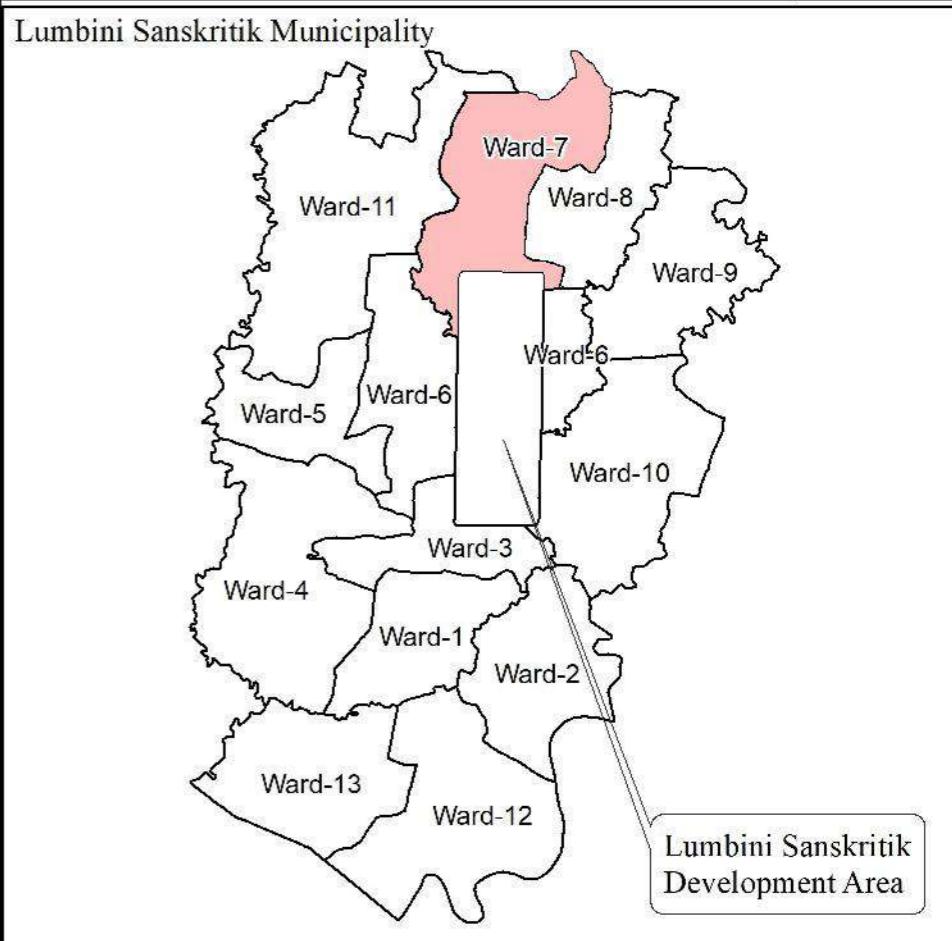
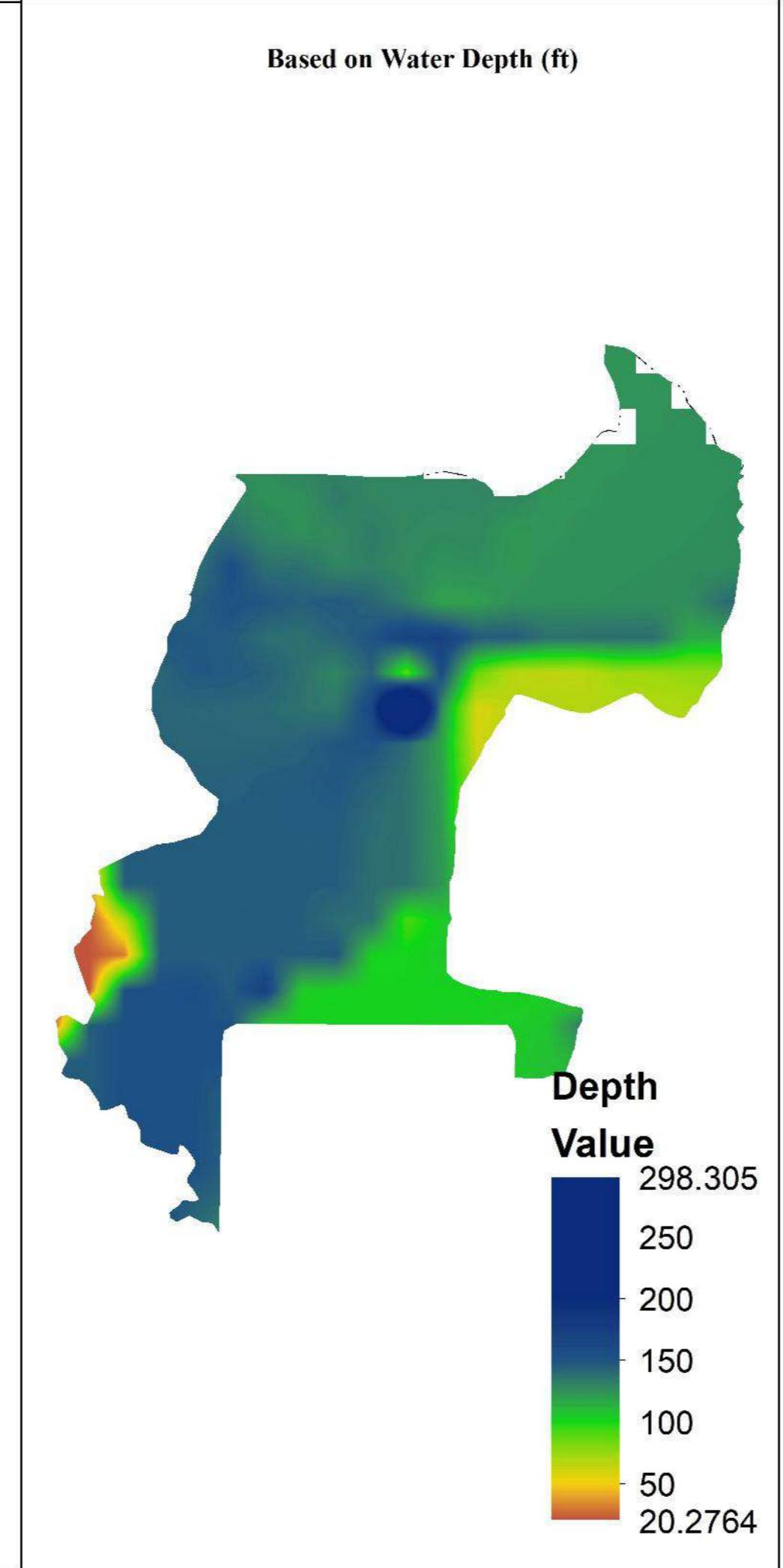
Scale 1:40,914
0 0.325 0.65 1.3 1.95
Kilometers

Coordinate System: Modified UTM 84
Projection: Transverse Mercator
Datum: Everest 1830
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9996
Latitude Of Origin: 0.0000
Units: Meter

Date :

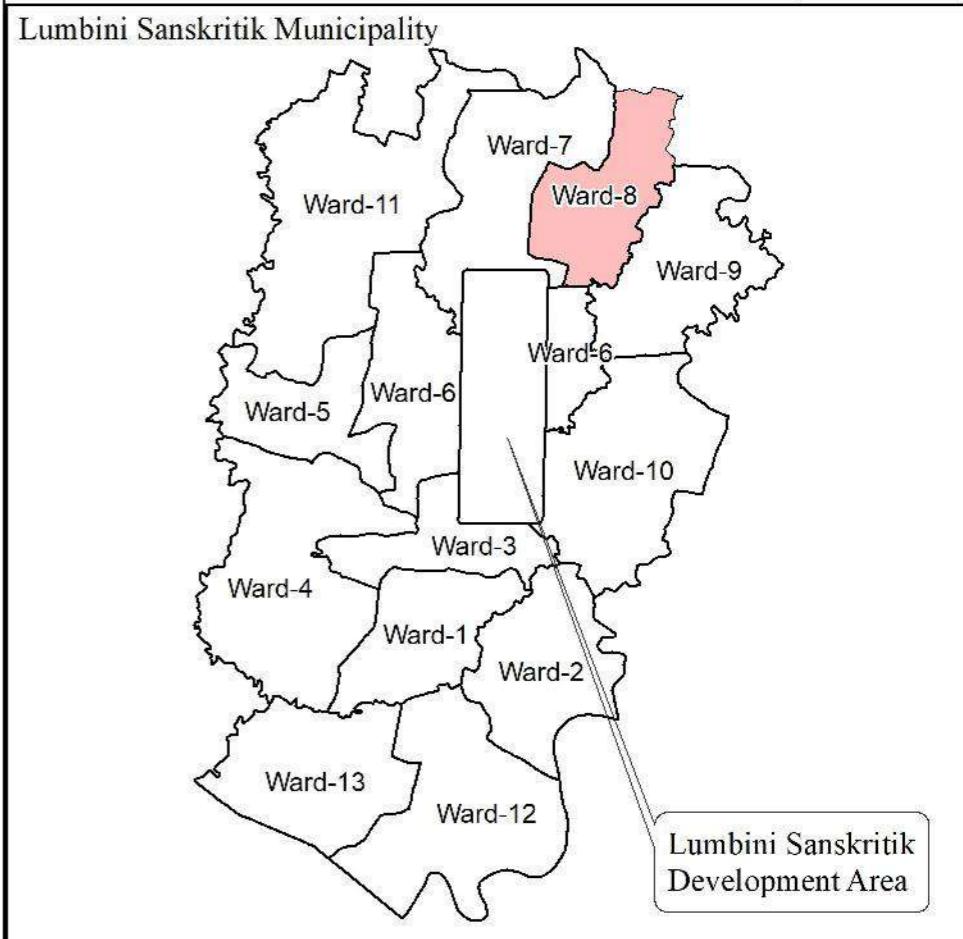
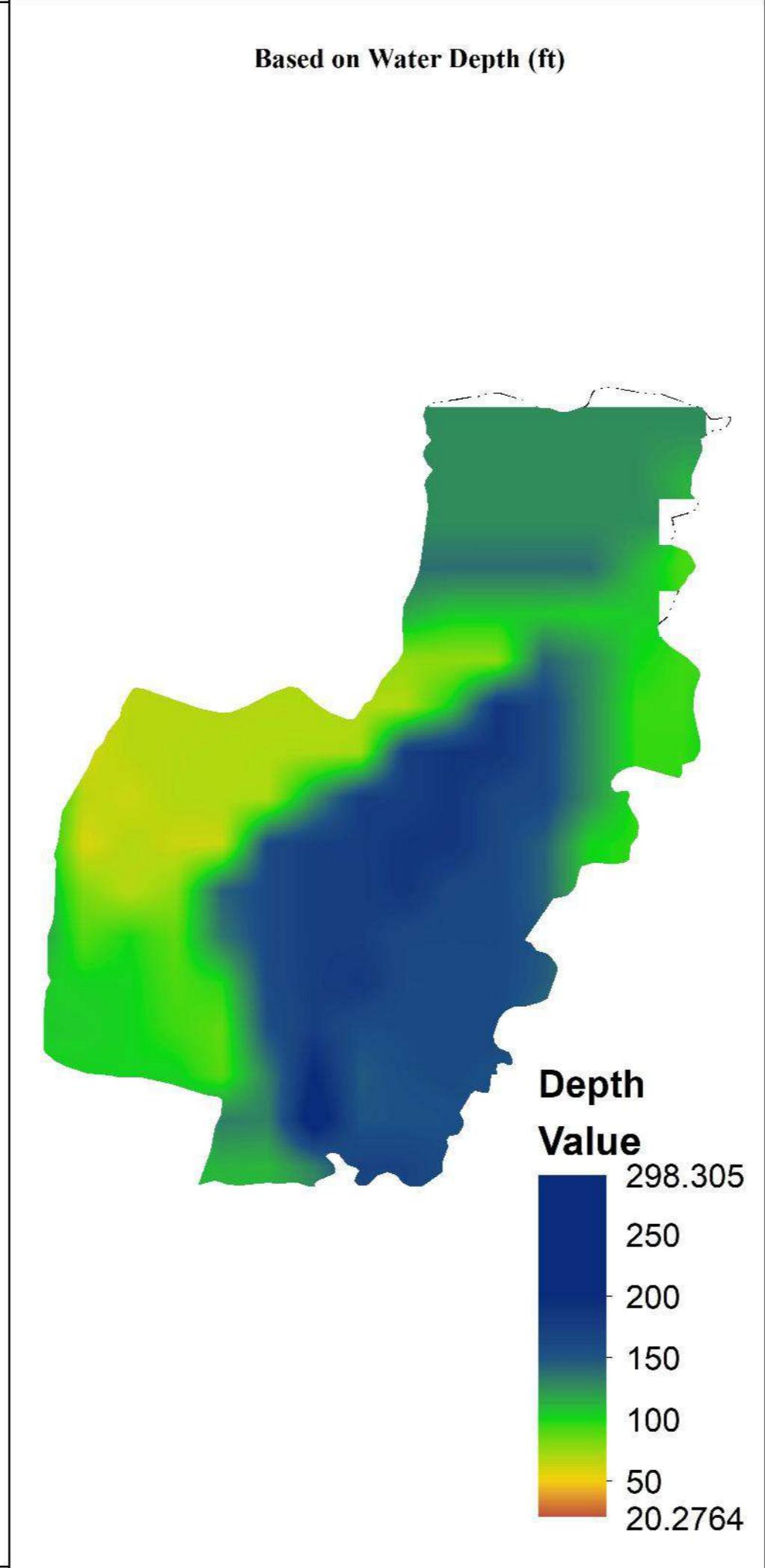
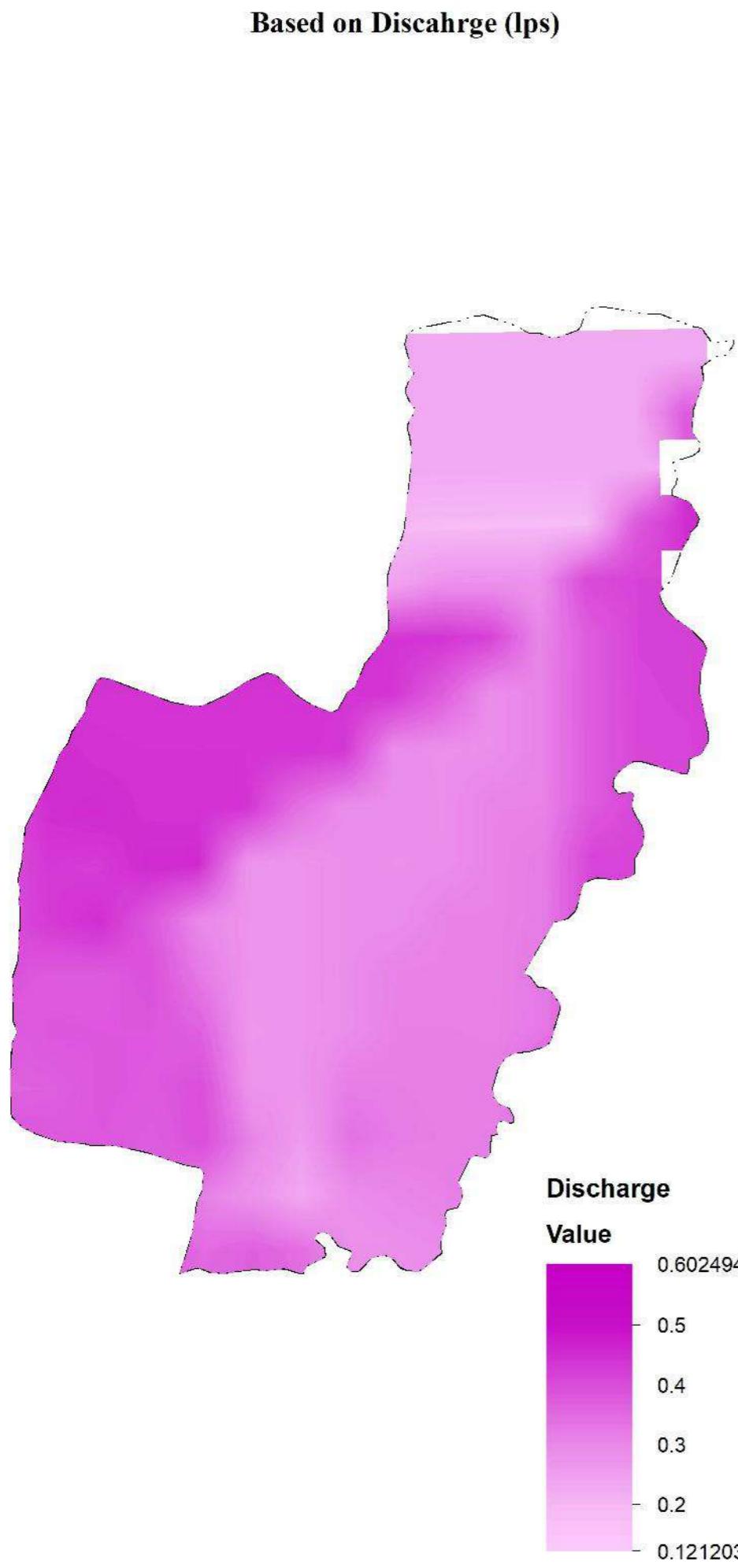
MAP NO : M-4
SHEET NO: 6

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:	Study of Groundwater Status of Lumbini Sanskritik Municipality		
Client:	 Lumbini Sanskritik Municipality Office of Municipal Executive Rupandehi, Nepal		
Consultant:	Topcon Engineering Consultancy Pvt. Ltd Buddhanagar, Kathmandu		
Data Source :	Municipality/Ward Office, Field Survey, MoFAGA, Department of Survey, Satellite Imagery		
Scale	1:31,007	0 0.25 0.5 1 1.5	Kilometers
Coordinate System:	Modified UTM 84		
Projection:	Transverse Mercator		
Datum:	Everest 1830		
False Easting:	500,000.0000		
False Northing:	0.0000		
Central Meridian:	84.0000		
Scale Factor:	0.9996		
Latitude Of Origin:	0.0000		
Units:	Meter	MAP NO :	SHEET NO:
		M-4	7

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



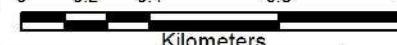
Project:
Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:

 Lumbini Sanskritik Municipality
 Office of Municipal Executive
 Rupandehi, Nepal

Consultant:
Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:
 Municipality/Ward Office, Field Survey, MoFAGA,
 Department of Survey, Satellite Imagery

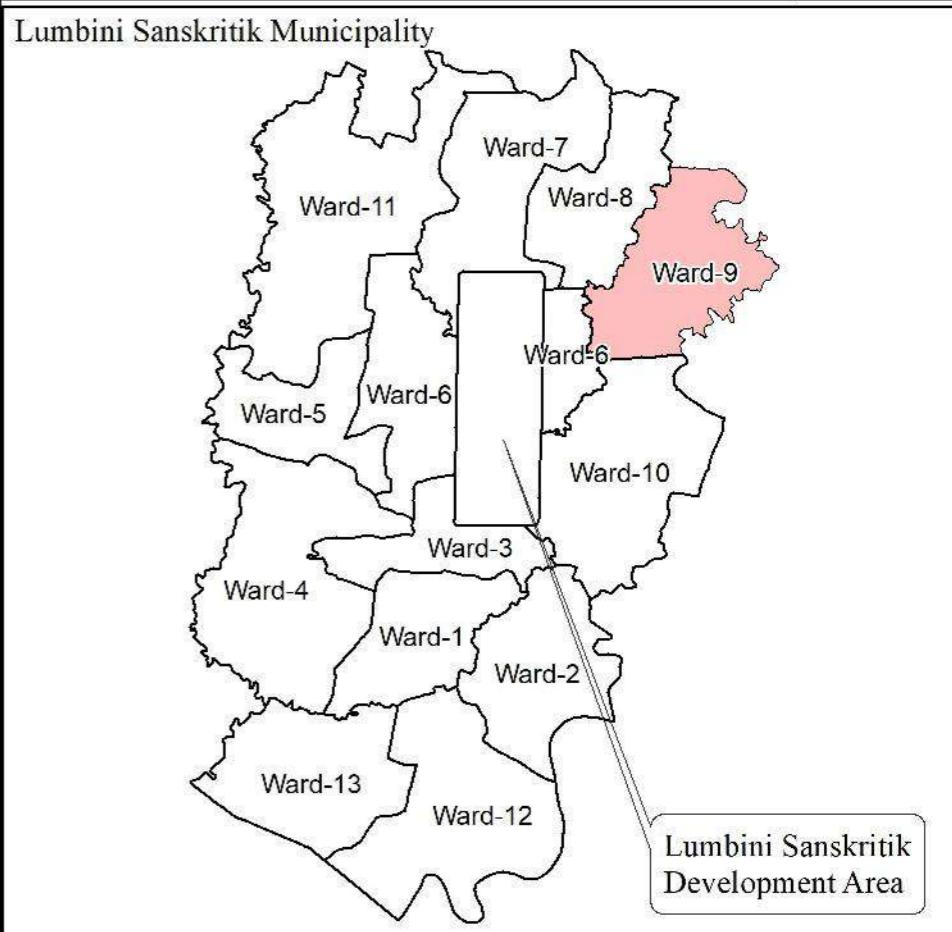
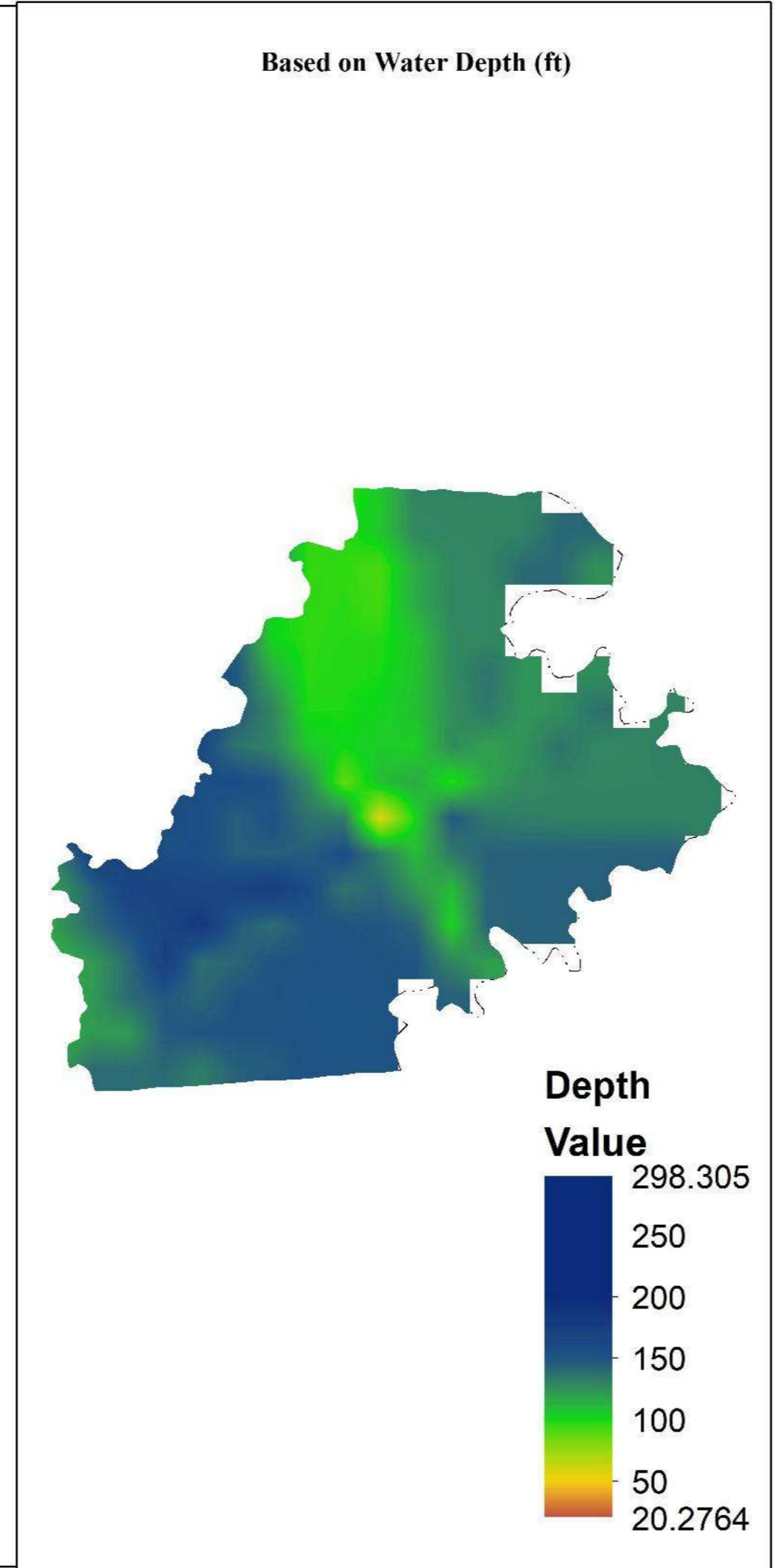
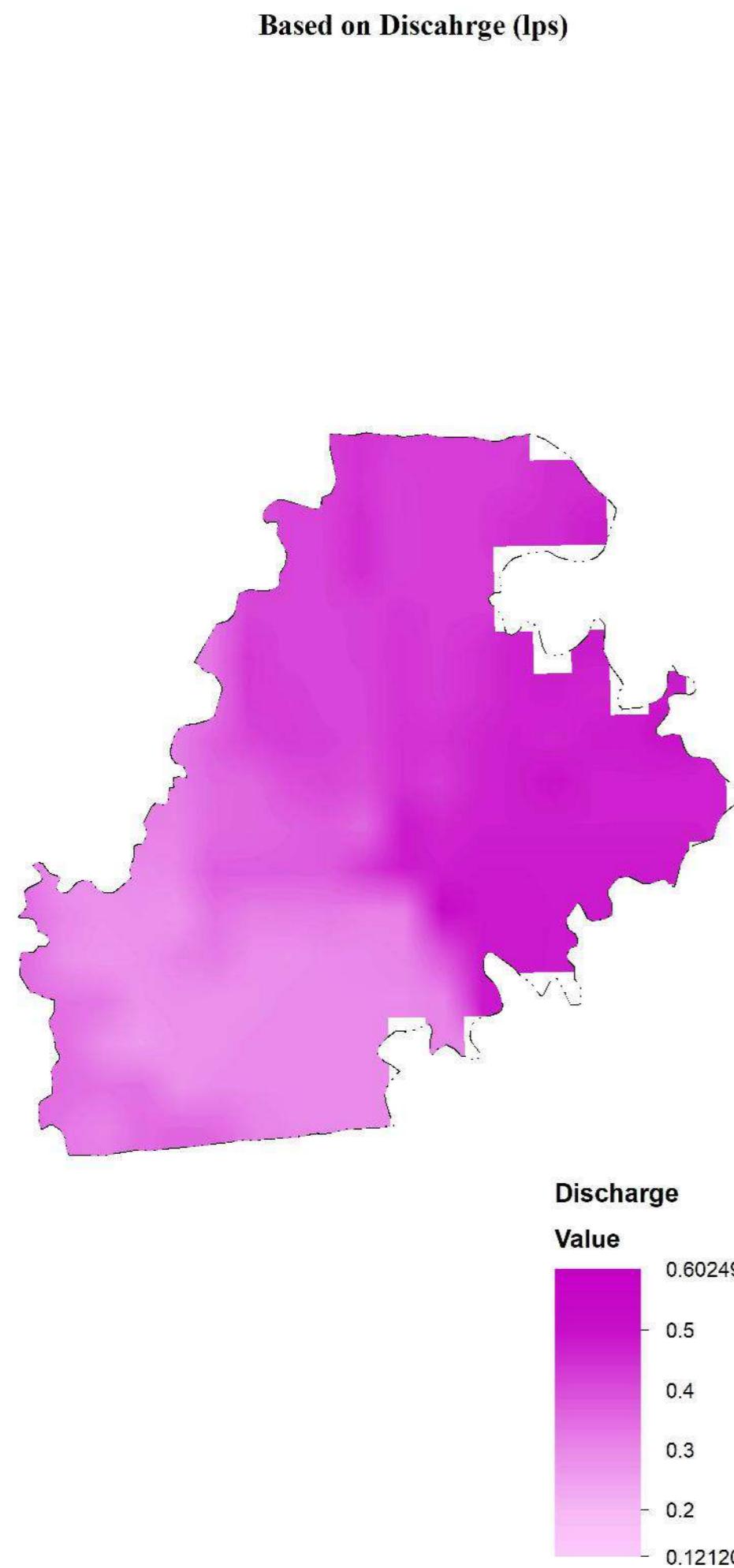
Scale 1:23,604


Coordinate System: Modified UTM 84
 Projection: Transverse Mercator
 Datum: Everest 1830
 False Easting: 500,000.0000
 False Northing: 0.0000
 Central Meridian: 84.0000
 Scale Factor: 0.9996
 Latitude Of Origin: 0.0000
 Units: Meter

Date :

MAP NO : M-4
 SHEET NO: 8

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

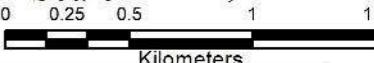
Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:30,708



Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

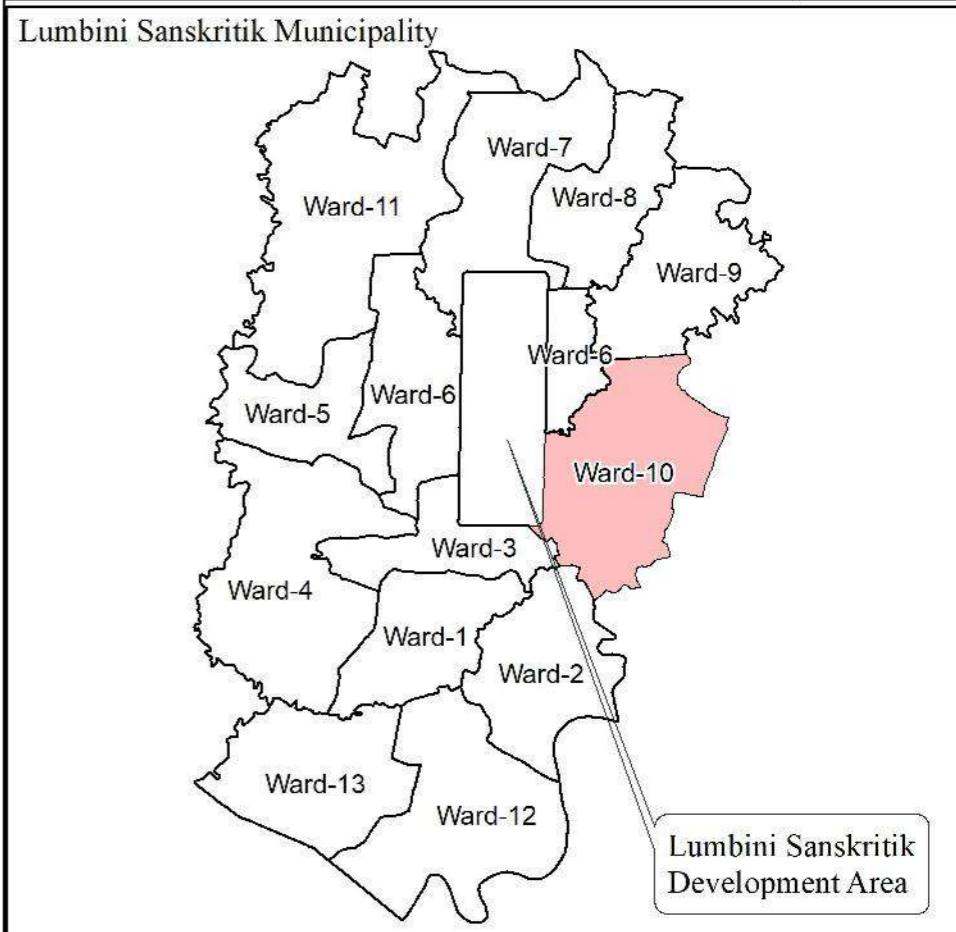
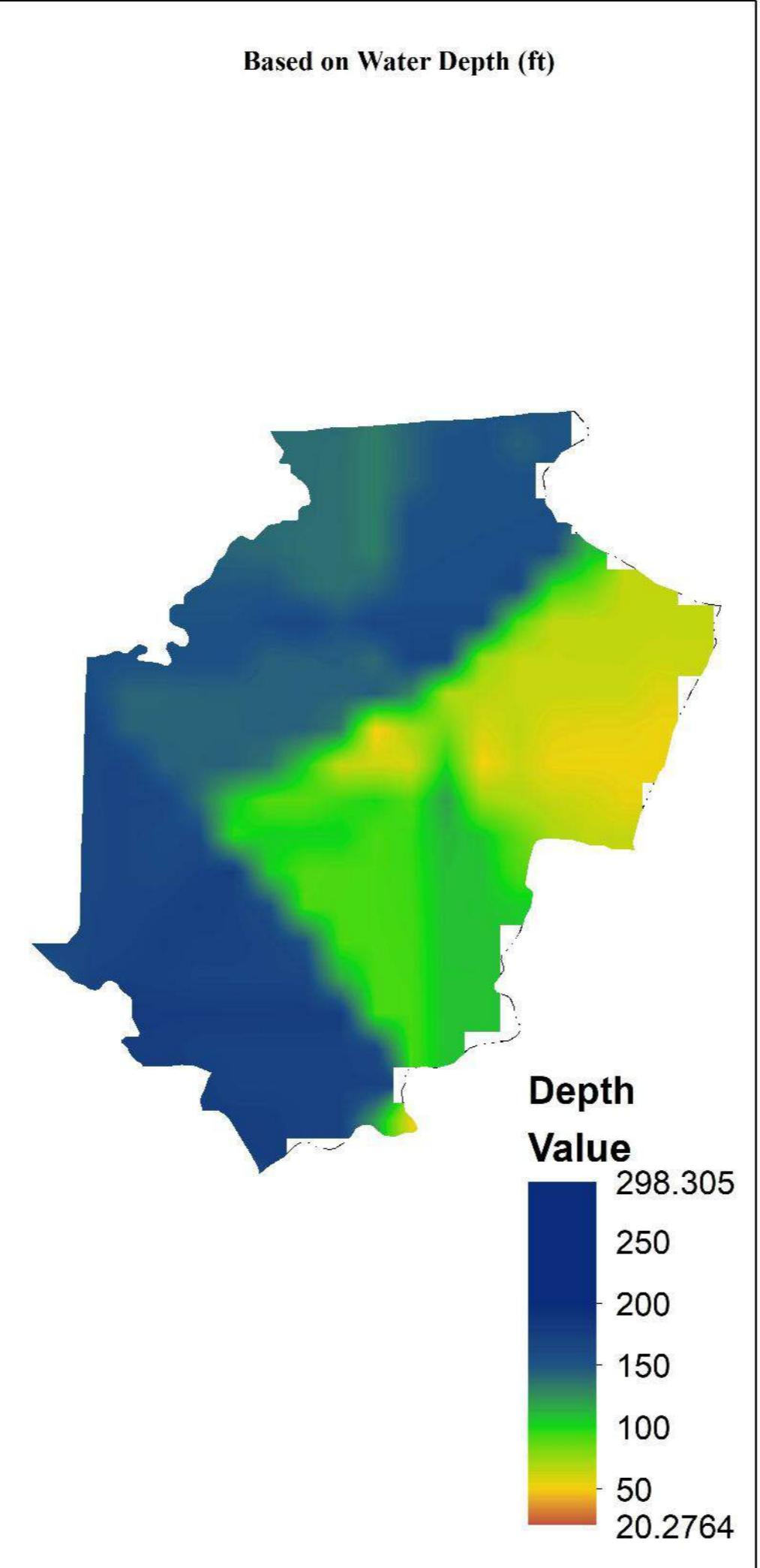
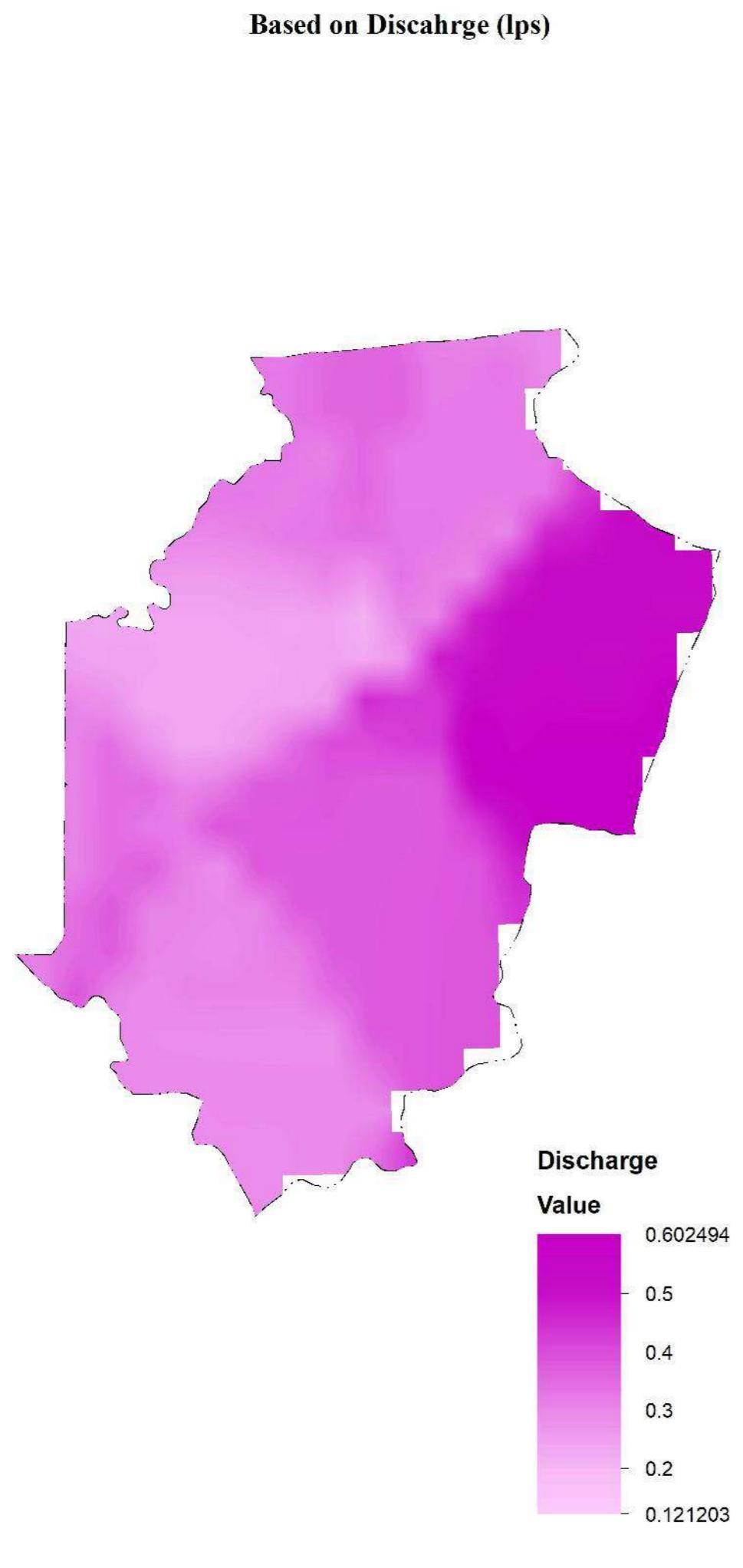
Units: Meter

Date :

MAP NO :
M-4

SHEET NO:
9

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

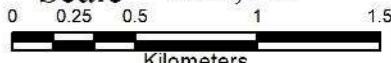
Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:30,949



Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

Latitude Of Origin: 0.0000

Units: Meter

Date :

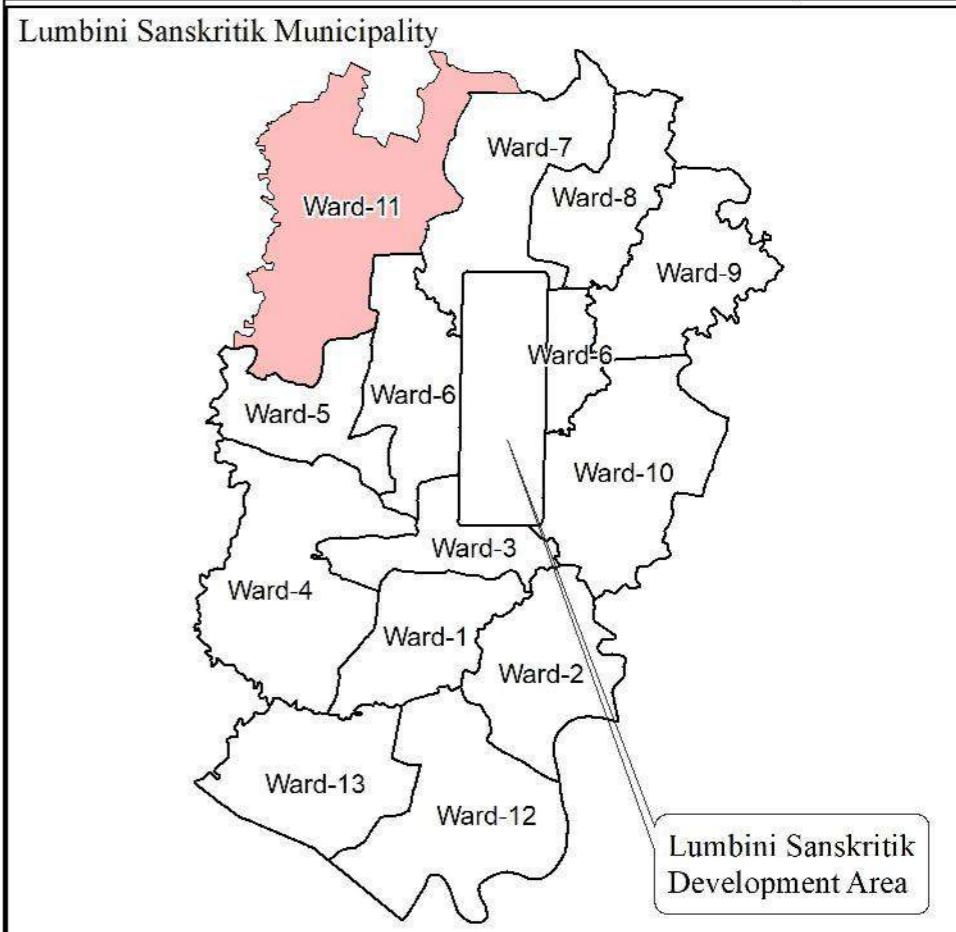
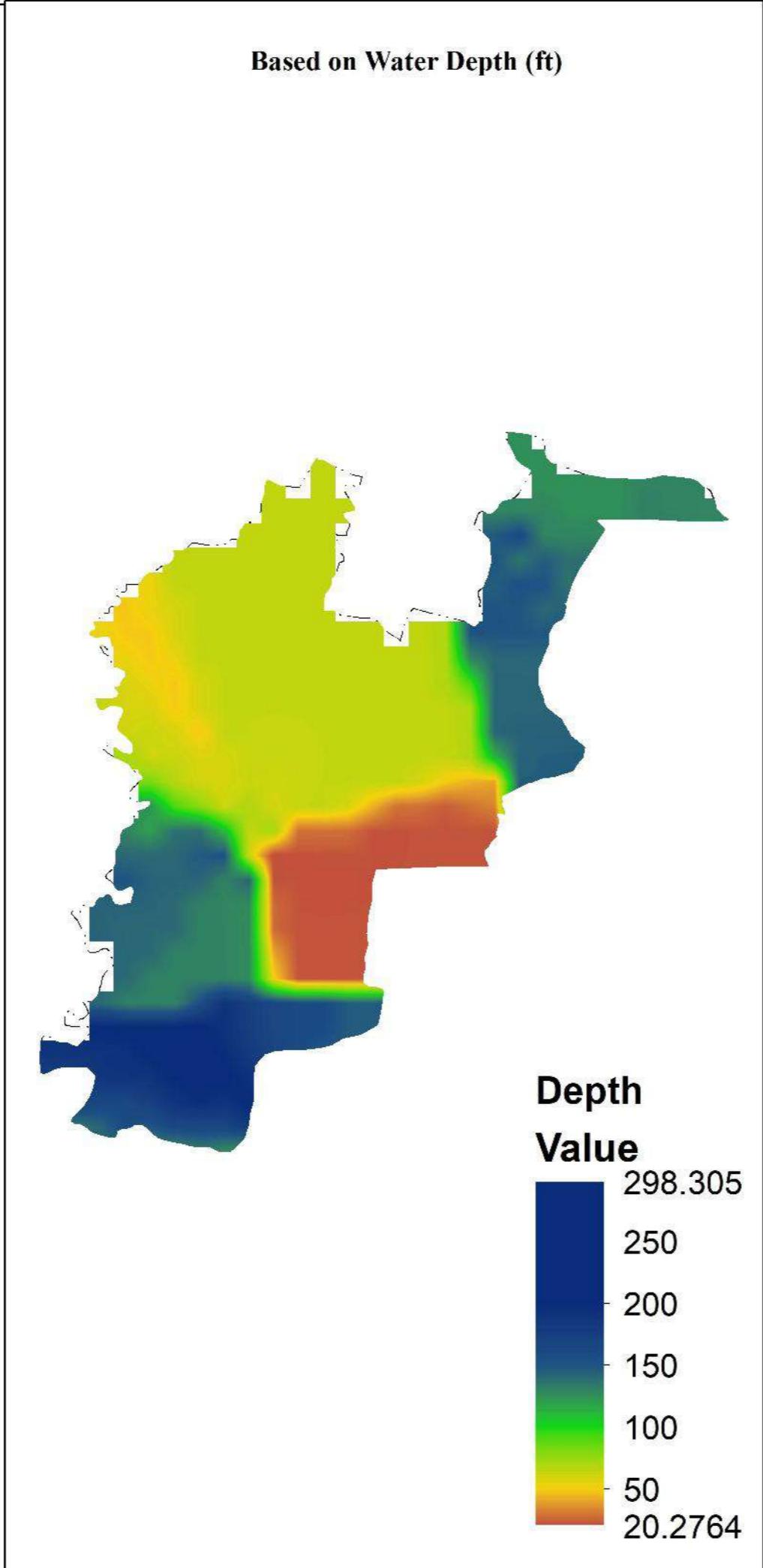
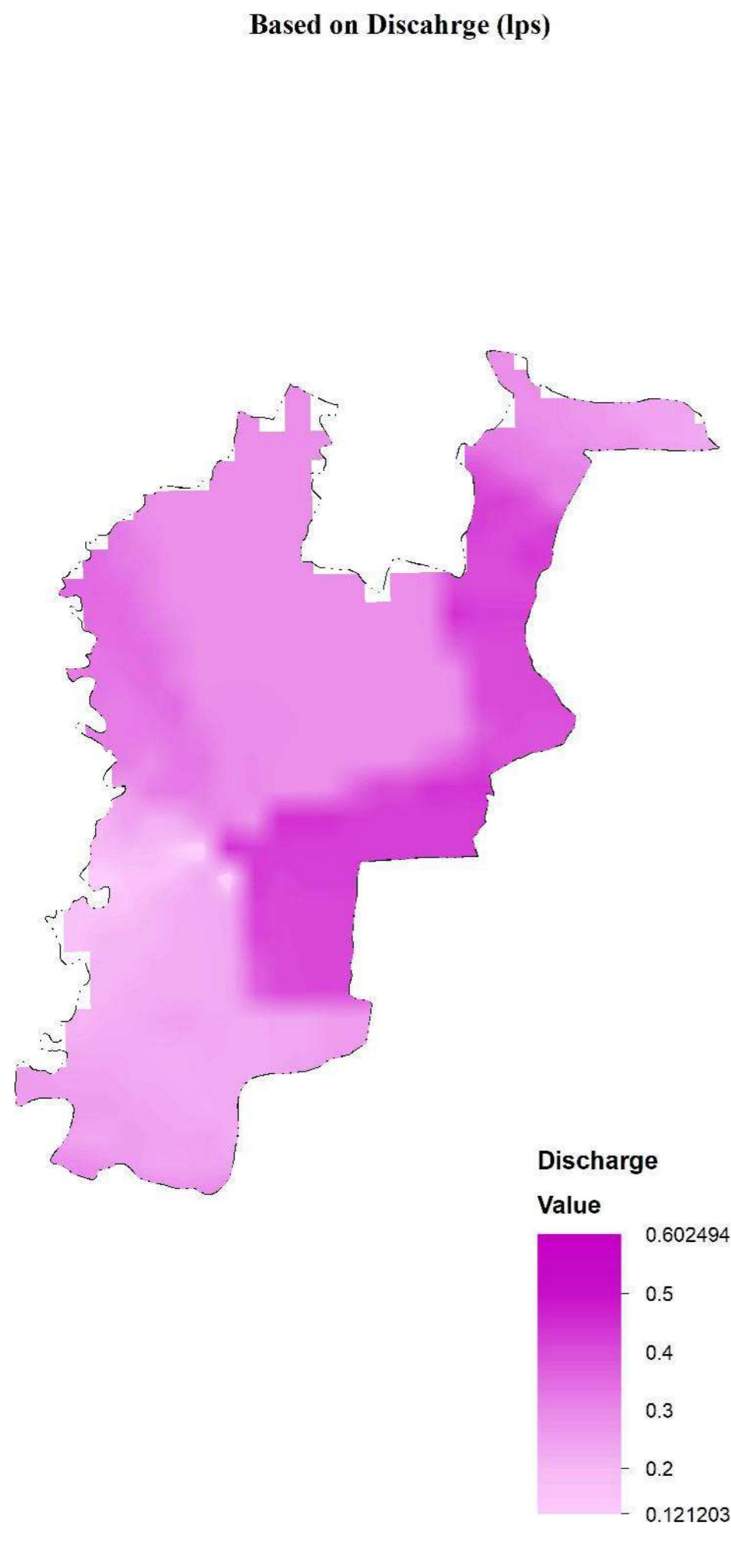
MAP NO :

M-4

SHEET NO:

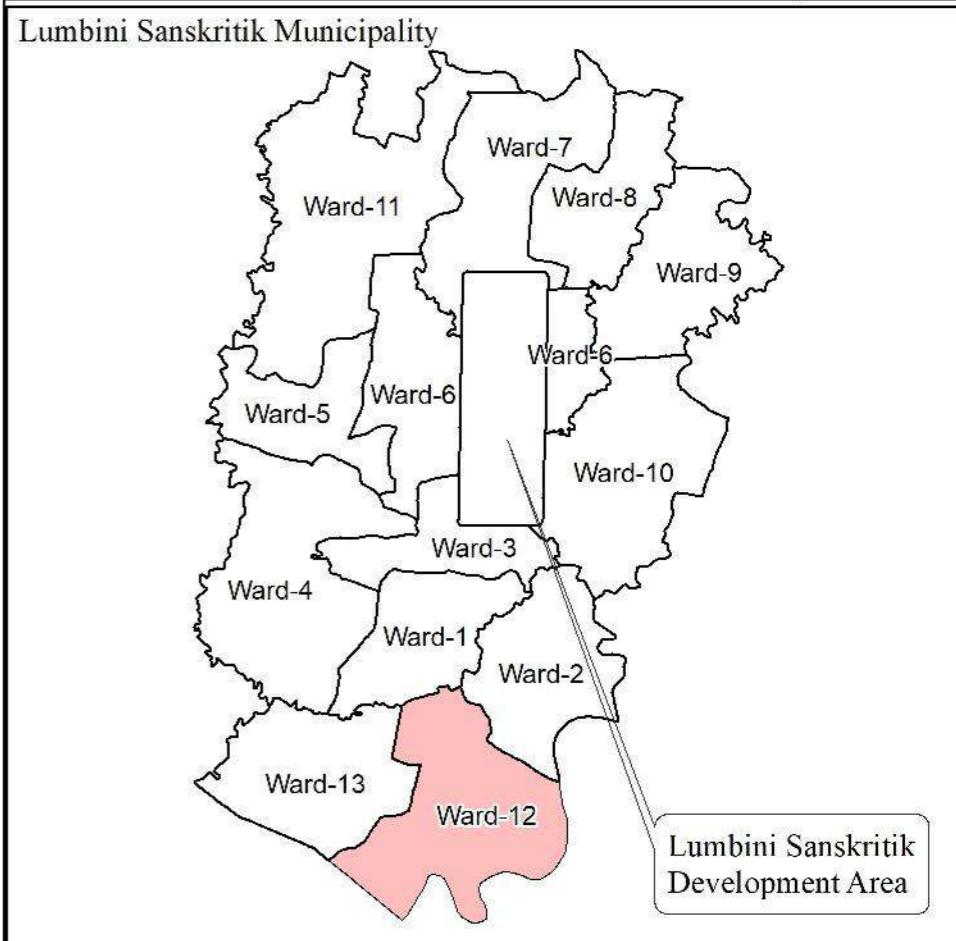
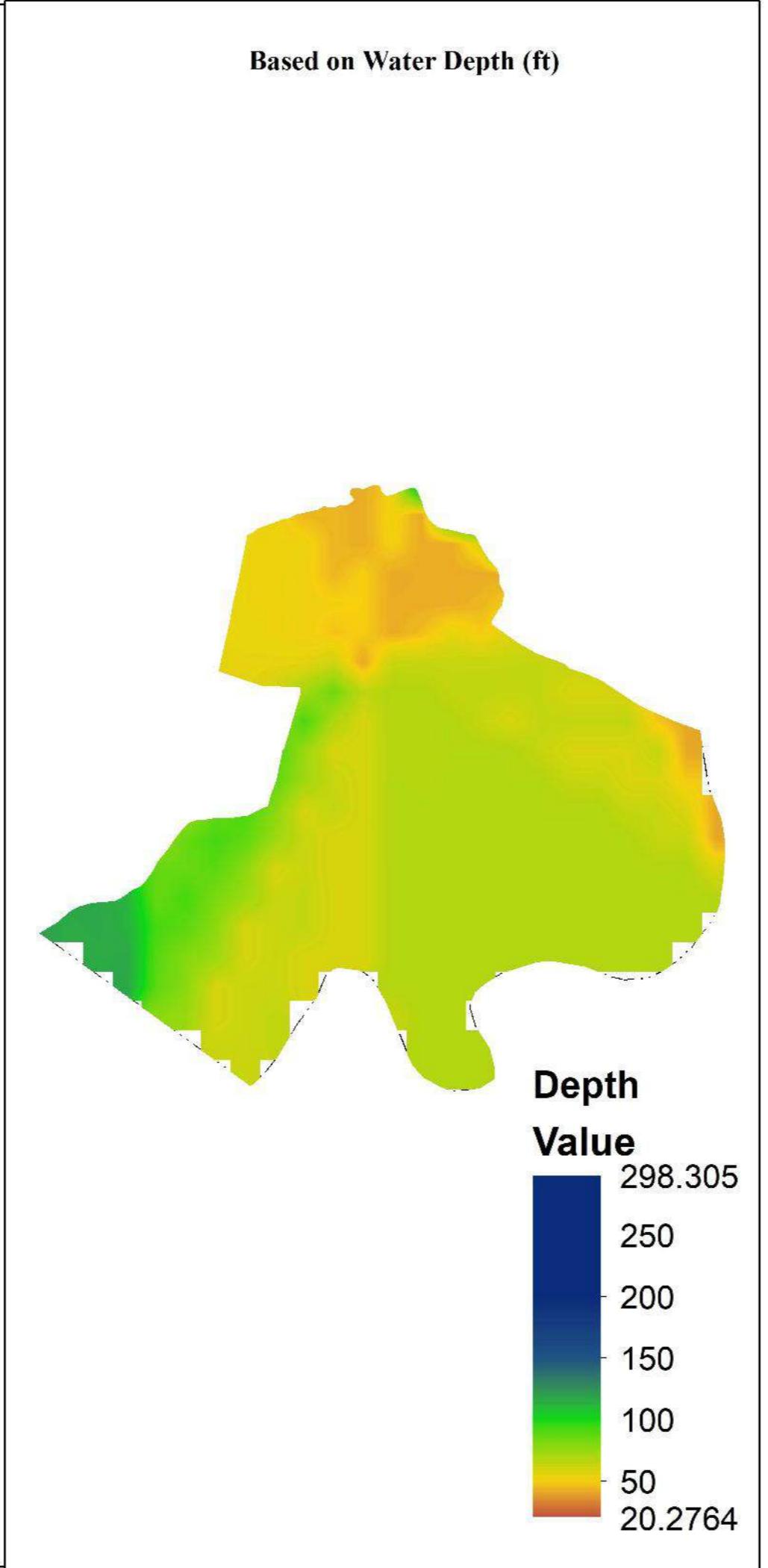
10

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:	Study of Groundwater Status of Lumbini Sanskritik Municipality		
Client:	 Lumbini Sanskritik Municipality Office of Municipal Executive Rupandehi, Nepal		
Consultant:	Topcon Engineering Consultancy Pvt. Ltd Buddhanagar, Kathmandu		
Data Source:	Municipality/Ward Office, Field Survey, MoFAGA, Department of Survey, Satellite Imagery		
Scale	1:44,420	0 0.35 0.7 1.4 2.1	Kilometers
Coordinate System:	Modified UTM 84	Date :	
Projection:	Transverse Mercator		
Datum:	Everest 1830		
False Easting:	500,000.0000		
False Northing:	0.0000		
Central Meridian:	84.0000		
Scale Factor:	0.9996		
Latitude Of Origin:	0.0000		
Units:	Meter	MAP NO : M-4	SHEET NO : 11

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



Project:

Study of Groundwater Status of Lumbini Sanskritik Municipality

Client:



Lumbini Sanskritik Municipality
Office of Municipal Executive
Rupandehi, Nepal

Consultant:

Topcon Engineering Consultancy Pvt. Ltd
Buddhanagar, Kathmandu

Data Source:

Municipality/Ward Office, Field Survey, MoFAGA,
Department of Survey, Satellite Imagery

Scale 1:37,450

0	0.3	0.6	1.2	1.8
Kilometers				

Coordinate System: Modified UTM 84

Projection: Transverse Mercator

Datum: Everest 1830

False Easting: 500,000.0000

False Northing: 0.0000

Central Meridian: 84.0000

Scale Factor: 0.9996

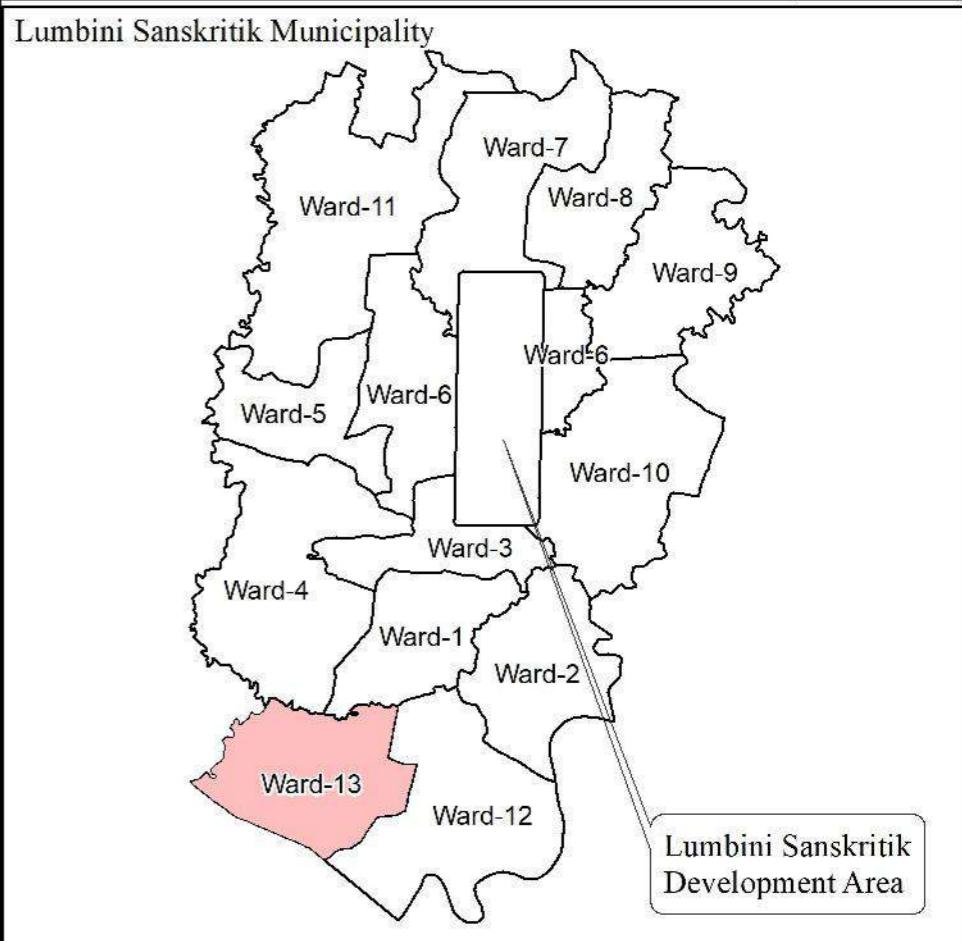
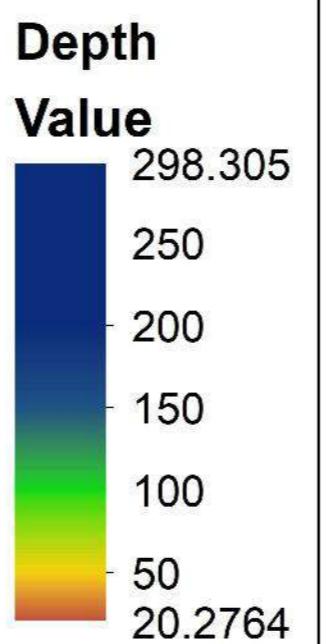
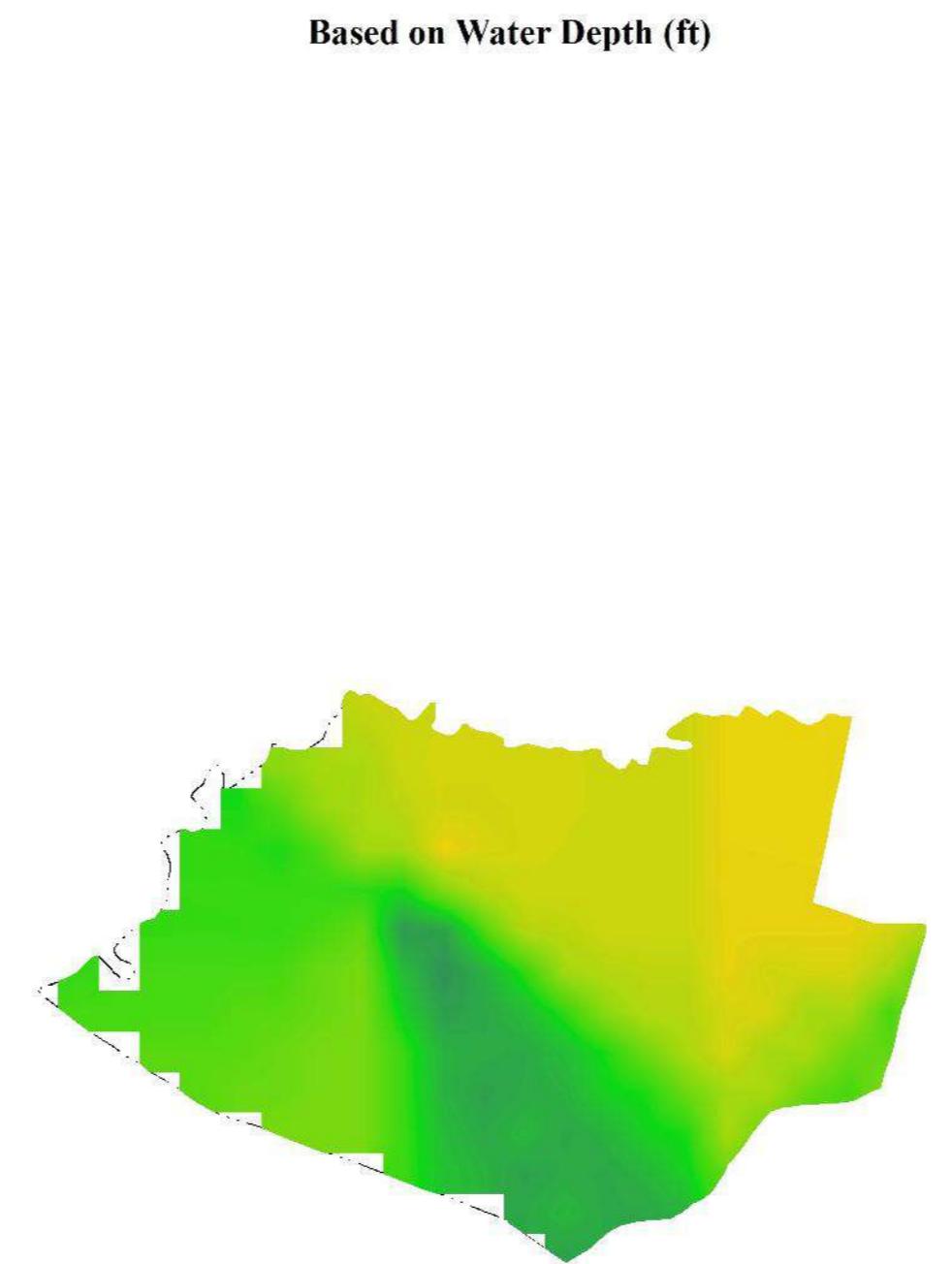
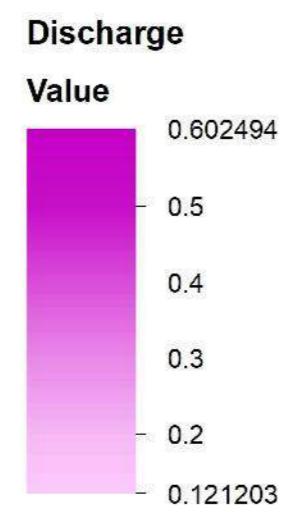
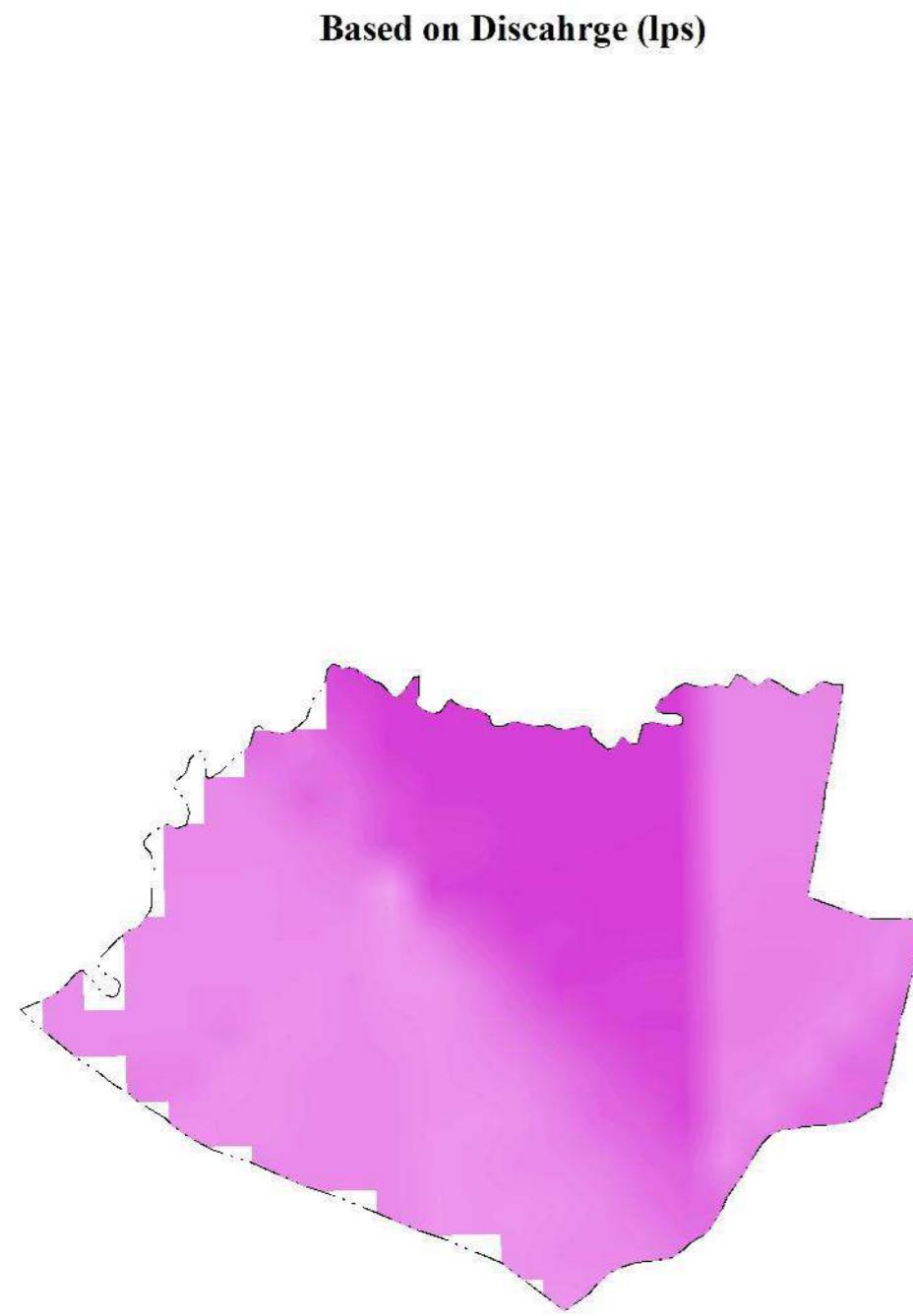
Latitude Of Origin: 0.0000

Units: Meter

Date :

MAP NO :	SHEET NO:
M-4	12

**THEMATIC MAP OF
GROUNDWATER ATTRIBUTES
LUMBINI SANSKRITIK
NAGARPALIKA**



<u>Project:</u>	Study of Groundwater Status of Lumbini Sanskritik Municipality		
<u>Client:</u>	 Lumbini Sanskritik Municipality Office of Municipal Executive Rupandehi, Nepal		
<u>Consultant:</u>	Topcon Engineering Consultancy Pvt. Ltd Buddhanagar, Kathmandu		
<u>Data Source:</u>	Municipality/Ward Office, Field Survey, MoFAGA, Department of Survey, Satellite Imagery		
Coordinate System: Modified UTM 84 Projection: Transverse Mercator Datum: Everest 1830 False Easting: 500,000.0000 False Northing: 0.0000 Central Meridian: 84.0000 Scale Factor: 0.9996 Latitude Of Origin: 0.0000 Units: Meter	Scale 1:35,358 0 0.3 0.6 1.2 1.8 Kilometers	Date :	MAP NO : M-4 SHEET NO : 13