(11) Report

The Evaluation System will make report on the above study and submit it to the each Basin Offices chiefs, director general and the Ministry of Water Resources in Nepal every year to get reliable data and offer the motivations.

7.4 Computer System

(1) Basic Concept

The basic policy for the Long-Term Programme and the idea for the sub-system required the basic concepts for the computer system as follows:

1) The computer and software must be designed to be operated easily.

   The computer and software should be operated without much knowledge about computer and operation manual. They should indicate suitable operation was on screen.

2) The software should be designed to be operated without additional maintenance.

   If all software will be developed newly, they will necessary to be maintained during operation for a while. The application software should be used as much as possible to prevent to be maintained so much and save manpower for developing.

3) The computer should be connected between the Central Office and the Basin Offices on line.

   The Basin Office should be connected to the Central Office with on line system to send data correctly and save time and manpower. The Central Office also should send data and information about error to the Basin Offices.

4) The system should have functions to help data checking.

   Data checking works are most important to get reliable data even if they are boring works. It also takes much time to check data. To check data correctly and save time and manpower, computer should help to check data as much as possible.

5) The Basin Office also disseminate date to user.

The computer system at the Basin Office must have function to disseminate data to users.

6) The system must store data safety.

Recently, the problems on virus has been serious and virus were found in the present DHM's computer. Since the computer system in the Long Term Programme will disseminate data on line, it must have functions for security.

7) The System should be designed as end user computing.

Since the users for meteorological and hydrological data are various, it is impossible to design the suitable format and necessary analysis program as users desires. This system should be designed as end user computing system.

8) This system make materials for management such as monitoring report and offer them automatically and regularly to the management staffs and units.

(2) Data Base

To store data correctly and safety, the Data Base and Data Base Management System will be used in the Long-Term Programme.

Data base is the amount the files stored into computer memory devices with uniform form without overlap. Data base management system (DBMS) is the tools to construct and manage data base and it has the functions of definition, register, search and update the object data. The DBMS usually has following conditions:

1) The DBMS has the function to make, change and delete schema and define view.
2) The DBMS has its own data base language.
3) The DBMS manages the data uniformly independent with each other logically and physically.
4) The DBMS has the function to store safety and recovery.
5) The DBMS operate data base.
6) The DBMS has surface functions to other language program such as Fortran, Basic and so forth.

Data can be stored safely and easily by the DBMS with above functions. If the application software of DBMS will be used, it will not be necessary to develop newly programme for above functions and it can be save time and manpower to develop software. The DBMS can store data without much additional maintenance.

Recently next generation data base such as full text data base and hypertext data base began to be developed. Full text data base can register the data with text base. Hypertext data base can register not only text but also drawing, voice, map and so on. If the drawing can be stored by these view types of data base, it is easy to enter and store observation record on chart recorded by automatical recorder. Part of these new generation data base have been already supplied. But at present it is not practical to use them. Since the new generation data base will not sure to be practical use level at present, data base system for the Long-Term Programme will be planned as the present generation data base that will register only figures and characters. New generation data base will be studied again in the further design step if possible.

Not only at the Central Office but also each Basin Offices will have data base by themselves, to disseminate data also at Basin Office Each Basin Offices and the Central Office should have two types of data base. One is the permanent data base for the data after full data checking and another is temporal memory for the data under processing. The general idea for the data base is as shown in Fig. 2.8.

(3) Global Area Network

The computer at the Central Office in Kathmandu, and the Branch Offices in Nepalgunj, Pokhara, Kathmandu and Biratnagar in Nepal will be connected to each other as shown in Fig. 2.3. Each Branch Offices will transfer data and information to the Central Office at the different time automatically in the midnight to prevent to confuse regularly. In case of transfer of data urgently, they will be transferred at any time on line.

(4) Local Area Network

Computers at the Central Office should be connected to each other to share data and output devices such as printer and plotter. If the Local Area Network (LAN) will be used to connect to each computer, it will be easy to manage and save time and manpower to transfer data.

Since in 1977, International Organization for Standardization (ISO) has been trying to make the Open System Integration (OSI) to standardize the technique of information for the computer. In the future, if the OSI will be completed, it will be easy to connect between the different systems and the computer network will be developed more. In 2005, decentralizing mode will be also more developed and become familiar because of the development of integrating and network technique.

(5) Easy Operation

This system should be operated with dialogue style such as the application software, WINDOWS. Every necessary information are to be displaied in one screen and everybody will be able to operate without operation manual for software shown in Fig. 7.4.

It will be useful to use map with stations on the display, when the object stations will be searched.

(6) Code Structure

At present, the code system for meteorological and hydrological stations are defined independently as chapter 4.6.

Since meteorological data and hydrological data are to be stored in the same data base in the Long-Term Programme, the code number for meteorological and hydrological stations must be identified uniformly. To prevent confusion between hydrology and meteorology stations, the new code system should be determined using the present station code system as follows.

New code system ABCDEFG.HIJ

where

A	:	A will indicate the classify of the station as follows. If A will be H, it will show this station will be for hydrology. If A will be M, it will show this station will be for meteorology
BC	:	B and C will indicate the classify of data or station.
DEFG.HIJ	:	This will indicate the station number. If the stations are to be present ones, the new cords are same with present ones. If possible, it should be integral

number changing the present code number in case of decimal number.

(7) File System

The DBMS will make every data files automatically. The main data items stored into data base are to be 1) Precipitation, 2) Water Level, 3) Discharge, 4) Discharge Measurement, 5) Rating Table, 6) Water Quality, 7) Sedimentation, 8) Riverbed Material, 9) Station Description, 10) List of Users, 11) Error Report, and 12) Check List.

(8) Input

The data are to be entered into computer by key board, digitizer, data logger and telemeter system shown in Table 7.9.

(9) Output

The data stored into data base will be disseminated by 1) photo copy of out put list, 2) floppy disk, 3) on line, and 4) data book.

(10) Programme

For Data Management System, following programmes must be developed mainly.

1) For Data Entry Programme

a) Precipitation

i) daily precipitation
ii) continuous precipitation
iii) rainfall intensity

b) Water Level

i) daily water level
ii) continuous water level
iii) extreme water level

c) Discharge Measurement

i) suspended sediment concentration
ii) particle size

d) Sediment

e) River Bed Material

i) grain size
ii) specific gravity
iii) percentage of void

f) Water Quality

i) water temperature
ii) pH-value
iii) Conductivity
iv) dissolved oxygen (DO)
v) Nitrogen Ammonia
vi) Nitrogen Nitrate
vii) Ortho-phosphate
viii) Turbidity
ix) Chlorine ion
x) Biological oxygen demand in 5 days (BOD)
xi) Chemical oxygen demand (COD)

2) For Data Processing

a) total

b) hydrography making

c) hyetograph making

d) isohyetal map making

e) discharge calculation

f) grain curve making

g) cross section making

h) height - area curve making

i) rating curve making

j) rating table making

k) discharge value converting from water level

l) duration curve making

m) sediment transportation calculation

n) height - velocity curve making

o) height - discharge plotting

p) discharge calculation by slope-area method

q) correlation coefficient calculating

r) mean area precipitation calculation

3) For Data Dissemination

a) data book making

b) output list making

c) data duplication on floppy disk

4) Management

a) making of check list

b) making the summary to show the condition of data collection and processing

c) nail function

d) sending system of management material to the Central Office at midnight without confusing with other Basin Office's data automatically

(11) Memory

The necessary memory size for the data base server machine to store all data up to 2015 at the Central Office will be more than IGB.

That for the Basin Office is estimated dividing that memory size by the number of Basin Office and will be about 300 MB.

To store necessary software including application software, minimum 100MB memory size will be necessary for the computer for data processing.

To enter data, minimum 40MB memory space will necessary.

7.5 Organization

7.5.1 Organization and Roles

The organization and roles for Observation System and Data Management System were studied to operate these systems as follows:

(1) Outline of DHM Organization and Roles

The DHM will consist of one Central Office, four Basin Offices, ten Branch Offices, ten Basic Stations and fourteen synoptic stations in 2005. Among these ten Branch Offices, four Branch Offices will be established at the same place with the present synoptic stations and also work as synoptic stations.

The synoptic stations and Basic Stations will maintain station, observe, check data preliminary and send data to the Basin Offices. The Branch Offices will maintain stations, collect data, check them preliminarily, instruct observer, observe and sent data to the Basin Offices. The Basin Office will maintain stations, collect data, observe, instruct observer, enter and process data including data checking work and send data to the Central Office. The Central Office will manage system, store data, disseminate data, train the staffs and analyze hydrological and meteorological characteristics in Nepal. Beside these works; the Central Office will work for weather forecasting, meteorology and hydrology services. The organization for these services are out of scope for the study.

(2) Central Office

The Central Office will consist of two divisions, the Data Management Division and Evaluation Division, for the Data Management System and some other divisions for other DHM works. These other woks are out of the scope of this system and it is impossible to suppose suitable idea for them in this study.

1) Data Management Division

The Data Management Division will be established in the Central Office at Kathmandu under the Director General. It will observe, process data, store data, disseminate data and manage these works including quality control and progress control. Under this, there will be two sections; Management Section and Data Arrangement Section. These sections will be managed by the division staffs.

a) Management Section

The Management Section will be established under the Data Management Division. It will manage the system through the Progress Control Unit and Quality Control Unit.

i) Progress Control Unit

The Progress Control Unit will operate the Progress Control System. It will make annual schedule to process data and monitor the actual condition of data collection and processing. If necessary, it will guide Branch Office, Basin Office or Data Arrangement Section including the units under them directly. It will make annual report on the condition of data processing and submit it to the Evaluation Division through Management Section and Data Management Division.

ii) Quality Control Unit

The Quality Control Unit will operate Quality Control System. It will check data, update check list, revise manual and study the counter plans for error, check method, observation method and data processing method.

It will make annual report on data quality and submit it to the Evaluation Division through the Management Section and the Data Management Division. If necessary it will guide the Branch Office or Basin Office directly to get more reliable data. It will have the Training Center, Laboratory and Work Shop. The Training Center will train the DHM staffs by the Training System. The work shop will repair observation equipment and maintain computer and software. The laboratory will analyze sediment and water quality.

b) Data Arrangement Section

The Data Arrangement Section will be established in the Central Office under the Data Management Division to store and disseminate data. It will consist of two units, the Data Storing Unit and Data Dissemination Unit.

i) Data Storing Unit

The Data Storing Unit will operate the Data Storing System to store data and information safely including making of back up data.

ii) Data Dissemination Unit

The Data Dissemination Unit will operate the Data Dissemination System to disseminate data to user. It will also publish data book.

2) Evaluation Division

Evaluation Division will evaluate system from the outsider's viewpoint by operating the Evaluation System. It will evaluate data quality and activities of observer and staffs to give them motivation. It will also dialogue with users to improve system. Referring these results, it will submit the recommendation to the Director General every year.

(3) Basin Office

Four Basin Offices, Far-Western Basin Office at Nepalgunj, Western Basin Office at Pokhara, Central Basin Office at Kathmandu and Eastern Basin Office at Biratnagar will be established to maintain and construct stations, instruct observers, observe, collect data, enter data, process data, disseminate data and send them to the Central Office. The Basin Office will consist of Data Arrangement Unit, Observation Unit, Laboratory Unit and Workshop.

1) Data Arrangement Unit

Data Arrangement Unit will collect, enter and process data with checking works according to the Data Collection System and the Data Processing System.

2) Observation Unit

Observation Unit will observe, maintain and construct stations and instruct observers according to the Observation System.

3) Laboratory Unit

The Laboratory Unit will analyze sediment and water quality.

4) Workshop

The Workshop will repair the observation and computer facilities.

5) Chief

The chief will have all responsibility and manage all activities in the Basin Office.

(4) Branch Office

Ten Branch Offices will be established in the northern part of Nepal to observe, maintain and construct stations, instruct observers and send the result to the Basin Office.

The place for these Branch Offices will be at Bangga, Chainpur, Simikot, Jumula and Mushikot under Far Western Basin Office, Jomsom under Western Basin Office, Simara under Central Basin Office, Okhaldunga, Khandbari and Taplejun under Eastern Basin Office as shown in Fig. 7.5. But the most suitable place for the Branch Office should be studied more detail in the further study.

(5) Basic Station

Ten Basic Stations will be established in Mahakali, Karnali, Babai, West Rapti, Tinau, Gandaki, Bagmati, Kamala, Kosi and Kankai River basins to get most reliable data.

(6) Synoptic Station

Synoptic Stations have been already installed by the DHM to observe meteorological data such as precipitation, temperature, humidity, wind and so forth.

The organization as above is summarized as shown in Fig. 2.1 and 2.2.

7.5.2 Staffing

Since the staffs for data management will not be necessary at Branch Office and stations, they will be posted at the Central Office and Basin Offices.

1) Basin Office

One staff for data entry and two staffs for data processing will be necessary.

2) Data Management Division

One staff for chief and two staffs for assistance will be necessary. The chief will have final responsibility for observation, data processing, data storage, data

dissemination and management for the Data Management System and the Observation System. The chief will act also for the chief of the Data Management Section.

3) Progress Control Unit

One staff will be necessary to investigate the condition of progress and to report the result to the Data Management Division chief.

4) Quality Control Unit

The chief will manage this unit, report the result to the Data Management Section, revise manual update check list and study more effective data processing method. Four staffs will check data, make counter plan for error, study data checking method and train in data processing at the training center. One staff will study more effective observation way in Nepal and train in observation.

5) Laboratory

One chief, two staffs for analysis on sediment and two staffs for analysis on water quality will be posted.

6) Workshop

One chief, four staffs for observation equipment, two staffs for maintenance on computer and network and one staff for stored supply will be necessary.

7) Data Arrangement Section

One staff for chief and two staffs for storing will be necessary. The chief will have responsibility for data storage and dissemination and manage Data Storing Unit and Data Dissemination Unit. The chief will judge the necessity of urgent request for unpublished data.

8) Data Storing Unit

One staff chief, two staffs for arranging of data and four staffs for maintenance of software will be necessary.

9) Data Dissemination Unit

Two staffs will be necessary to disseminate data. They will sell data book, disseminate the analysis result to the related organ and serve duplicated data except for urgent request of unregistered data.

10) Evaluation Division

The Evaluation Division will manage the committee to evaluate the Data Management System and Observation System and make report on the result of recommendations for these system. The committee member will be organized by the staffs of MOWR, DHM, DOI, NEA, DSCWM, DWSS, NWSC, WECS and related organ such as Project Office, UNDP, GTZ, GDS and JICA. To manage this committee, one senior staff will be necessary.

11) Other Division

The number of other staffs, who will not be related to the Data Management system and Observation System technically, will not be able to be determined only for this system. To operate this system, at least four senior engineers will be necessary in other Division to analysis meteorological and hydrological observation network and evaluate observation and data processing way. Besides this analysis work, the other division will be necessary to work for other DHM roles such as weather forecasting, flood forecasting, analysis on agrometeorology and climatology and so forth. But the staff for these works are out of scope for the study.

8. THE IMMEDIATE PROGRAMME

8.1 Basic Policy

8.1.1 Objective

The Immediate Programme aims to improve the existing hydrometeorological observation and data management system urgently to observe and manage reliable data without large expansion of the system.

8.1.2 Selection Criteria

The Immediate Programme is one of the improvementation phases for the Long Term programme. The Data Management System will be completed in the Long Term Programme at last. Therefore, all of the system planned in the Immediate Programme must be included in the system for the Long Term Programme.

Since the DHM disseminates, observed and processed data to users at present, the system in the Immediate Programme must continue to disseminate these data even if it is one improvement phase. The quality of data disseminated to users in the Immediate Programme must be same with those in the Long Term Programme because they will be the official data and used as the basic data for the national planning. It indicates that almost of the Long-Term Programme must be completed in the Immediate Programme except for the following items.

In the Long Term Programme, the grovel area network between the Central office and the Basin Offices will be planned to disseminate data not only in the Central Office and the Basin Office and check data quickly and easily. In the Immediate Programme, it will be omitted, because the Basin Office will not disseminate data in the Immediate Programme. The staffs for data processing will go to the Central Office from each Basin Offices to check data and correct them finally. If there will be some correction, they will be updated also at each Basin Offices after the staffs will finish to correct at the Central Office and return to their Basin Office.

The local area network at the Basin Office will be also omitted in the Immediate Programme. Because almost of staffs at the Basin Office will not be familiar with computer and network and the number of resources such as computer and printer will be not so much.

In the Immediate Programme, the telemeter system will be omitted because of the purpose of the Immediate Programme. The DHM does not have telemeter system at present and the Immediate Programme aims to improve existing system without large expansion of the system.

The optical disk for back up of the original data will be also omitted. The technology for the optical disk to store document is new and it is developing at present. After it will be developed completely, it should be installed.

The Immediate Programme was planned by omitting 1) global area network, 2) local area network at the Basin Office, 3) telemeter system, and 4) optical disk system for storing original data in the Long-Term Programme as above.

8.1.3 Data to be Entered

In the Long-Term Programme, precipitation, river water level, discharge, sediment and water quality were selected as the observation items. Among of these items, the water quality and the riverbed materials were not selected in the Immediate Programme. Therefore the data to be entered in the Immediate Programme were precipitation, river water level, discharge and sediment load.

8.1.4 Structure of System

The Data Management System in the Immediate Programme will consist of nine sub-systems, the Data Collection System, Data Processing System, Data Storing System, Data Disseminated System, Data Quality Research System, Training System, Progress Control System, Quality Control System and Evaluation System same with the systems for the Long-Term Programme.

8.2 Proposed Plans of Immediate Programme

8.2.1 Data Collection System

The Data Collection System will collect observed data and information from the hydrological and meteorological stations to the Basin Offices by mail, staffs or observers. In case that there will be Branch Offices, they will be collected through the Branch Office at first and then they will be transferred to the Basin Office.

The data and information to be collected will be water level, precipitation, discharge, sediment concentration and information of the stations. Ordinary, the manual gauge record will be collected by mail every month. If there will not be post office near from stations, the record will be collected by staffs regularly. The chart recorded by automatical gauge and the discharge measurement record will be collected by staffs when they will go to inspect stations or observation. The sediment sample will be transferred by manpower every month.

The date, and collection way will be recorded on the register at the Branch Office and the Basin Office by the administration staffs. Then they will be brought to the data processing staffs. In case of emergency information, they will be sent to the chief or engineers without register and counter plans will be made as soon as possible.

8.2.2 Data Processing System

The Data Processing System will process data and publish data book as follows:

In case of sediment sample, it will be analyzed at laboratory under the Basin Office. The result of analysis will be transferred to the Basin Office before data processing.

The collected data will be checked preliminary at the Basin Office and the Branch Office if the recording form will be fill in correctly and the observed data will not be strange value. In case that collected data will be checked at the Branch Office, they will be transferred to the Basin Office.

After preliminary data checking, they will be entered into computer by the suitable data entry way for the recording form at the Basin Office as shown is Table 7.9. The data recorded on the paper form will be entered by keyboard. The data on chart will be entered by digitizer with adjustment work such as time correction. In case of ram card, they will be entered directly through ram card reader.

The entered data will be checked again if they will have been entered correctly by the Total Checking. The computer will check them whether if the format of data will be correct, the entered data will be overlapped and the data will be in the probable range.

After data entry checking, they will be processed dividing into three levels; first processing level, second processing level and third processing level. The first processing level is the

data processing level that entered data will be arranged and stored into computer independently without other data. The second data processing level will be that the stored data will be processed using other data. The work in this level will be making rating table, estimation of discharge value from water level record, estimation of sediment transportation and so forth including data checking.

The original and processed data will be transferred to the Central Office by the Basin Office staffs after data processing including data checking. At the Central Office, they will be checked finally by the staffs for the Quality Control Section with the staffs of the Basin Office. After the final data checking, they will be published in the third data processing level. Then they will be sent to the store room.

The detailed procedure for data processing is same with that in the Long-Term Programme and the outline of them is as above in Fig. 2.6.

8.2.3 Data Storing System

The Data Storing System will store processed and original data and information such as observation station, inspection sheet, error report and analysis result. Before storing, the data and information transferred to the store room will be checked whether if they will be necessary to be stored. The processed data will be stored in the data base. The original data and information will be stored in the store house without making back up on optical disk. The processed data will be stored into data base. These stored data will be checked regularly if the storing term will be over. If the term will be over, they will be thrown away.

If the Data Dissemination System will request stored data, the requested data will be duplicated and submitted to the Data Dissemination System. In the Immediate Programme, they will not be disseminated on line.

8.2.4 Data Dissemination System

The Data Dissemination System will disseminate the data and information by data book, duplication of output list or floppy disk with off line system only at the Central Office. They will not be disseminated at the Basin Office in the Immediate Programme.

If user will request data or information, the Data Dissemination System will check if the required data will have been registered. If these data will have been stored, it will ask to

duplicate them to the Data Storing System and disseminate the duplicated data. In case that the data will not have been stored, it will check if the requirement will be urgent. If it will be urgent, the Data Dissemination System will arrange to submit them even if the required data will be under processing.

8.2.5 Data Quality Research System

The Data Quality Research System will analyze the hydrological and meteorological characteristics in Nepal to research the data quality and recommend more reliable observation network, observation method and data processing procedure including data checking way. The main items to be analyzed in this system will be average precipitation, depth-area-duration analysis, runoff, sediment rating curve and sediment yield of catchment. The result of analysis and recommendation will be reported to the Evaluation System once a year.

8.2.6 Training System

The training will be held at the newly installed training center at the DHM Central Office in Kathmandu and field to train the DHM staffs in observation and data processing.

The training course will consist of regular training course and special training course. The regular training course will be held regularly following the annual schedule to train all staffs related with observation and data management works. The special training course will be held for the staffs nominated by the Data Quality Unit or chief to train some limited field for observation and data management.

The regular training course will consist of two courses. One will be general training course to train ordinary observation and data management way. Another will be the care training course to care errors found by data checking and to train counter plan for them.

The outline of these training are as follows:

(1) General Training

The general training will be held for all DHM staffs to train the DHM observation and data management way and necessary knowledge about their work mainly. This training will be held at the training center and field by classifying with the position; newly employed staff, field assistant, junior hydro-meteorological assistant, senior hydro-meteorological assistant and engineer. The target of each classes were as shown in Table 7.12.

1) Newly Employed Staff

The training for newly employed staff will be held at the training center when they will start their work for about two days to introduce the DHM work. The training items for them will be about outline of the DHM organization and roles, observation and data processing.

2) Field Assistant

The training for the field assistant will be held at the Central Office for lecture and in the field for practice of observation for about one week. The main training items will be about observation of precipitation, water level, discharge measurement and sampling for sediment concentration.

3) Junior Hydro-meteorological Assistant

The training for the junior hydro-meteorological assistant will be held at the Central Office for lecture and in the field for practice of observation and data entry including basic knowledge on computer for about one week. The main training items will be about observation of precipitation, water level, discharge measurement, sampling of sediment concentration and computer for data entry.

4) Senior Hydro-meteorological Assistant

The training for the senior hydro-meteorological assistant will be held at the training center in the Central Office to train about data processing including computer training and basic knowledge of meteorology and hydrology for about three weeks.

5) Engineer

The training for the engineer will be held at the training center to train about observation including new method that the DHM will not adopt, data processing including data checking, analysis and management. To master latest technology, domestic and international seminar will be also useful. To practice analysis, the engineer will be sometimes nominated as counter part for developing project.

The training items and necessary training hour are as shown in Table 8.1.

(2) Care Training

The report submitted by the Evaluation System will recommend the useful data checking way, more reliable data processing way and counter plans to prevent to reappear the same error referring the data processing work and data quality. To make good use of these recommendations, the staff related to observation and data management will be gathered to the training center and they will be instructed for about one weeks every year.

(3) Special Training

The staffs nominated as the trainees in the reports submitted by the Evaluation System will be trained at the training center about special training items asked by the report.

8.2.7 Progress Control System

The Progress Control System will make data processing schedule in advance and monitor the condition of data collection and processing to control the Data Management System. Necessary materials to monitor the condition will be made by computer automatically every month. Referring these materials, it will monitor and guide related staffs to process data on schedule. Finally, the result of the progress will be reported to the Evaluation System every year.

8.2.8 Quality Control System

The Quality Control System will check data finally at the Central Office, study the more reliable check way including check list, make counter plan to deal with error, revise manual, and guide the Basin Office to improve data quality. The summary of data quality will be reported to the Evaluation System every year.

8.2.9 Evaluation System

The Evaluation System will evaluate the data quality and the condition of data processing to improve the Data Management System totally from the outsider's view points.

To motivate observers and staffs to observe and process data on schedule and carefully, the Evaluation System will chose the good observers and staffs every year and prize them according to the report submitted by the Quality Control System and the Progress Control System.

The observation network, observation way, data processing way and the condition of stations will be evaluated by the Evaluation System to improve the system, by referring the report submitted by the Data Quality System and the Data Quality Research System.

The Evaluation System will make and submit the report about the result of evaluation every year. The DHM should study the result and improve the system.

8.2.10 Software

(1) Basic Policy

Almost procedures for data processing and making materials of management planned for the Immediate Programme will be carried out by computer. The general idea for the necessary software was made base on following basic policy:

1) The software will consist of five main parts; data entry, data processing, data dissemination, management including network and data base management system (DBMS) and others such as data base and analysis.

2) The Immediate Programme will omit software for three parts; grovel area network to connect between the Central Office and Basin Offices, telemeter system, and data dissemination function at the Basin Office from the Long-Term Programme.

3) Application software such as relational data base (RDB), DBMS, local area network (LAN) and graphic software will be used as much as possible to save manpower and developing term and prevent bugs.

4) The data processing software will have functions for data checking.

5) To manage data easily, the DBMS will be adopted.

6) The software will check user before connecting to the computer. If necessary for security, the access will be refused.

7) The software will be developed based on end user computing and the software for analysis will be ready by the user. But that for data processing will be served in advance to process data correctly with fixed procedure.

8) The software and computer will be designed to be operated easily.

(2) Code System

The code system for the Data Management System will consist of three parts; station code, user identity code and quality code. Each meteorology and hydrology stations have their own station code to be operated smoothly. At present, station code is organized divided

with meteorology and hydrology stations. In the Immediate Programme, it will be integrated same with that in the Long Term Programme.

The user that will contact to the computer directly will be checked by the user identity code. If the users will not be registered as user in the DHM, their access will be refused. The user will be classified into four groups by that code; outsider of the DHM, ordinary DHM staff, DHM staff for data processing and DHM staff for management of computer and data base. The outsider and the ordinary DHM staff will be able to use data except for data entry, processing, editing and registration activities. The DHM staffs for data processing will be able to use, enter, edit and process data besides registration activity. The DHM staffs for management will be able to use computer for any operation work. The user identity code will consist one character, six digit number and pass words. The first character will show the classified group. The six number will express the user. If the user will belong to the DHM, the foreword three digit numbers will show the year that the staff will be employed by the DHM. The least three digit number will be decided in order that the staff asked to be registered. The password will consist five character that will be determined by the user.

The quality code will consist of one digit number to show the original data and it will be put by computer automatically. For example, the original data such as hourly water level and daily water level for discharge record will be cleared by the quality code.

(3) File

The file system will be designed considering that for the Long Term Programme. Even if the data file for water quality and riverbed material will not be necessary in the Immediate Programme, the area for these data file must be secured in the memory in advance.

The necessary data file for the Data Management System will be as follows:

Station description	User	Condition of data collection
Condition of data entry	Condition of data processing	Error report
Continuous water level	Daily water level	Daily mean water level
Extreme water level	Discharge measurement	Cross section
Continuous precipitation	Daily precipitation	Daily mean precipitation
Precipitation intensity	Rating table	Continuous discharge
Daily mean discharge	Extreme discharge	Sediment concentration
Sediment transportation	Particle size	Grain size
Suspended gravity	Percentage of void	Flow duration curve

Isohyetal map	Water temperature	pH-value
Electrical conductivity	Dissolved oxygen	Nitrogen ammonia
Nitrogen nitrate	Ortho-phosphate	Turbidity
Chlorine ion	BOD	COD

(4) Software

The software consists of five main parts; data entry, processing, dissemination, management and others. These software can be also classified with four data processing cycles as follows:

1) Anytime

When the request will occur, the necessary processing work for data entry, data processing up to first processing level, data dissemination and management such as user checking, initializing of data file and management of network and data base will be carried out at any time.

2) Monthly

The condition on progress of data collection and processing will be monitored every month.

3) Half year

Entered data will be processed and the discharge value will be estimated every half year. The back up for data base will be also made at the Central Office. But the back up will be made every month at the Basin Office.

4) Yearly

The data book will be published and all newly processed data will be registered every year after full data checking.

The necessary programmes for the Data Management System can be classified from the view point of processing cycle as above and the outline of the classification is as shown in Table 2.1. These programmes will be developed dividing into smaller developing units and the structure of software will be as shown in Fig. 2.7. The outline of procedure for data processing operated by these software is as shown in Fig. 2.6.

(5) Input

Collected data and information will be entered by key board, digitizer and data logger depend on the recording style. The command menu will be adopted to operate computer easily with mouse. The outline of the basic main structure as shown in Fig. 8.1.

(6) Output

The processed data and information will be disseminated by photo copy for computer output list, floppy disk and data book. Only for the data processing purpose at the Central Office, data will be served by on line system.

8.2.11 Proposed Computer Equipment

(1) General

Computer will be installed at the Central Office and each Basin Offices for the Data Management System in the Immediate Programme. At the Basin Office, the collected data and information will be entered and processed including data checking by the computer. The processed data and information will be sent to the Central Office and they will be checked, stored and disseminated there including management work by computer.

The function for the computer installed at the Central Office is classified with six functions; data checking, data storage, data dissemination, management, data entry and training. That for Basin Offices is classified with two functions; data entry and data processing including data storage.

(2) Central Office

The computer at the Central Office will be connected to each other by LAN to rationalize work and to share resources such as printer, X-Y plotter and data.

1) Computer system for data base

The computer for main data base will work also as Lan server. The memory for that computer will be necessary more than 1 GB to store data up to 2015 and software such as DBMS, LAN, data processing and so froth. The computer system will also have UPS for safety because of the condition of electricity in Nepal. To make back up data, optical disk device will be attached.

2) Computer system for data checking

Because the computer between the Central Office and the Basin Offices will not be connected to each other in the Immediate Programme, the processed data will be checked finally and corrected at the Central Office with limited term to publish data book. To carry out these works with limited term, the processed data will be checked and corrected by four computers. These computer will have more than 100 MB memory, one printer installed for the Model System in 1992, one X-Y plotter to check data and client software.

3) Computer system for data dissemination

One computer, printer and X-Y plotter will be installed for data dissemination. One photocopy machine will be also installed to duplicate data.

4) Computer system for management

One lap top computer TOSHIBA T3100 and printer installed for the Model System will be installed to monitor the condition of data processing.

5) Computer system for data entry

One lap top computer, TOSHIBA T3100, installed for the Model System in 1992, one digitizer and one ram card reader for data logger will be installed for data entry. Although the data will be entered at the Basin Office, the computer for data entry will be installed also at the Central Office to enter historical data, station information, error report and so forth.

6) Computer system for training

The computer system for training will be installed at the Training Center to train the DHM staffs. This system must be complete system to enter, process, store and disseminate data with DBMS and LAN functions to train staffs completely including control of system such as DBMS and LAN without damage of actual Data Management System at the Central Office and Basin Office.

This system will consist of five computer. One will work for data base server installed at the Central Office for data base in the Model System and others will be for data processing and entry including client function for each Basin Office. This system will have also printer installed in 1992 for the Model System, X-Y plotter, digitizer, optical disk and ram card reader.

(3) Basin Office

The computer at the Basin Office will be off line system and it will consist of two main parts, data entry system and storage system.

1) Computer system for data entry

The computer system for data entry will consist of one lap top computer installed for the Model System, digitizer and ram card reader.

2) Computer system for data storage

The computer system for data storage will consist of one desk top computer with 300 MB memory and DBMS, optical disk device and printer. This printer has been installed for the Model System in 1992. It will be connected also to the computer for data entry by the buffer.

3) Others

Photo copy machine will be also installed to make back up for original data to sent to the Central Office.

8.3 Organization and Staff

The organization in the Immediate Programme will be almost same with that in the Long-Term Programme besides following items:

1) In the Immediate Programme, Work Shop Unit at each Basin Office will not be established yet.
2) The staff for water quality and riverbed material will not be necessary.
3) The staff for telemeter system will not be necessary.

The DHM will consist of the Central Office, four Basin Offices, ten Branch Offices and fourteen aero/synoptic stations. The Central Office will be at Kathmandu and consist of two divisions, Data management Division, and Evaluation Division, and some units and sections under these divisions for the Data Management System. Under the Data Management Division, there are two sections; Management Section and Data management Section. The Management Section will have two units; Progress Control Unit and Quality Control Unit. The Data Arrangement Section will have also two units, Data Storing Unit and Data Dissemination Unit. The Basin Office will be established at Nepalgunj, Pokhara, Kathmandu and Biratnagar. It will consist of three units; Data Management Unit and

Observation Unit, Laboratory Unit beside administration and accountant part. The Branch Office will be established at Bangga, Cheinpur, Simikot, Jumula, Musikot, Jomson, Simara, Okhaldunga, Khandabari and Tapejun. The aero/synoptic stations will be same with the present site.

The number of staffs can be estimated by deleting the staffs related to the water quality analysis, riverbed material and telemeter system from that for the Long-Term programme.

9. IMPLEMENTATION SCHEDULE

9.1 Basic Concept

The Data Management System will be developed with the following basic concepts.

1) The implementation schedule is divided into three stages; first stage, second stage and third stage.

2) The target of the first stage is to complete the Immediate Programme. The target year is 1995.

3) The target of the second stage is mainly to expand the Observation System. The target year is 2000.

4) The target of the third stage is to complete the Long Term Programme. The target year is 2005.

5) The developing work such as design of the system and programming is to be carried out at the DHM office to transfer of technology, maintain the system by only the DHM staffs after developing and make more suitable system for the DHM by discussion with designing team and the DHM when developing.

6) To communicate well, the committee for the development of system is to be established between the DHM and designing team and hold the regular meeting.

9.2 Immediate Programme

The committee on the developing of the system will be established by the system engineer and the DHM in the Central Office at first. The purpose of this committee will be 1) to communicate well between the designing staff and the DHM, 2) to investigate the actual request of the DHM, 3) to transfer technology, and 4) to maintain the system only by the DHM staffs after system test

The committee will be organized by the system engineer and the DHM staffs such as Director General, chief hydrologist, chief meteorologist, chief climatologist, Basin Office chief and engineer related with data processing and checking in 1993. It will review the Long-Term Programme and Immediate Programme for about two weeks to make good consensus of the Programmes. After full discussion, the actual designing work will be started.

The design level will be divided into two stages, basic design and detail design. The basic design will be carried out for about three months from August 1993 to determine what to do with the system including organizing the committee. Some of the DHM staffs from the committee member will be nominated as the counterpart and they will be trained how to design system. The necessary computer equipment will be also determined in this stage.

After the basic design, the detail design will start to determine how to realize the necessary functions determined in the basic design on April 1994 for about three months. Before the end of detail design, some of the necessary computer equipments for programming will be installed at the Central Office on June 1994 tentatively including electricity and air conditioning construction to programming as shown in Fig. 9.1. The same counterparts in the basic design will be work as that in detailed design.

According to the design, the program for data management system in the Immediate Programme will be developed in the programming stage for about ten months from August 1994 to May 1995. To make such programs, one system engineer and five programmers will be assigned for ten months. The scale of programme will be assumed 50,000 steps. Averagely, 1,000 steps programme will be developed by one programmer for one month. It will indicate that the total man-month for programmers will be 50 and it will take 10 months to develop necessary program by 5 programmers. The five programmers will be assigned at Kathmandu and one foreign system engineer will overseer them. In the programming stage, at least five counterparts to train how to maintain programme will be nominated and help the programmers. The manual not only for operation but also maintenance will be submitted to the DHM. Up to the end of January 1995, all the system including computer system installed to develop program temporarily will be installed at the offices for data management and training center, and all construction work of electricity and air conditioning will be finished up to the end of April, 1995.

Before operation, the software and computer equipment will be tested for one month at the Central Office if the necessary specification will be satisfied with according to the report of basic design and detailed design. If there will be some trouble, it must be solved in this testing stage. In this stage, the related staffs in the Central Office and the two staffs from each Basin Offices will be trained to operate safety. After testing, all data registered in the old system will be transferred.

The remaining computer system for the Basin Offices will be transferred and installed at the Basin Offices by one system engineer and the DHM staffs trained at the Central Office from

September to December. The operation and maintenance training will be held for about one month for each Basin Office when computer will be installed.

The outline of implementation schedule are as shown in Fig. 9.2 and the general idea for this system is as shown in Fig. 2.9.

9.3 Long Term Programme

(1) General

Most of the Data Management System will be completed in the Immediate Programme except for optical disk system for duplicate of original data, global area network to connect the data base between the Central Office and the Basin Office, telemeter system and local area network at the Basin Office.

(2) Second Stage

In 2000, optical disk system will be installed at the Central Office for back up of original data.

(3) Third Stage

In 2005, the Data Management System will be reinforced as follows.

1) The computer at the Central Office and the Basin Office will be connected to each other with public line to transfer data and information.
2) The data observed by the telemeter system at the Basic Stations in the three main river basins will be transferred to the Basin Office.
3) The computer at the same Basin Office will be connected to each other by local area network.

The system installed in the Immediate Programme will be reviewed to reinforce as above, and the revised system will be designed for about two months. The new software will be programmed for about four months including testing in 2004.

The committee for revising of the system will be established by the DHM and system developing team before reviewing to make good consensus. The training will be carried out by on-the-job training way. At last the Data Management System will be completed as shown in Fig. 2.3 with the implementation schedule as shown in Fig. 9.2.

10. COST

The necessary equipments for the Data Management System is as shown in Table 10.1.The direct cost for this system is estimated to be about Nepalese Rupees 67.5 million as shown in Table 10.2.

Followings are the conditions on which the cost estimate is based:

1) The direct cost of the project is estimated by CIF at Kathmandu based on the price level in February, 1993.

2) The following exchange rates are applied.

1.0 US Dollar	=	46.4315 Nepalese Rupees
	=	121.05 Japanese Yen

3) Local currency is required for purchase of domestic materials.

TABLES

Table 2.1 PROCESSING CYCLE

	Data Entry	Data Processing	Data Dissemination	Management	Others
Any Time	• PAPER FORM Data recorded on paper form are entered by key board including data entry checking, and they are displayed, printed out and drawn.	• TOTAL Daily mean, monthly and yearly values are calculated and the results are displayed and printed out.	• DISSEMINATION Stored data and information including graph are disseminated by printer, file style, X-Y plotter and floppy disk	• USER CHECKING Users are checked whether they are safety.	
	• CHART Data recorded on chart are entered by digitizer or keyboard including data entry checking, and they are displayed, printed out and drawn.	• PROCESSING DATA CHECKING (1) Processed data until first processing level are checked and the results are displayed, printed out and drawn/		• INITIALIZING Data file is initialized.	
	• LOGGER Data recorded by data logger are entered by card reader including data checking, and they are displayed, printed out and drawn.			• LAN Network is checked if it works well.	
	• INFORMATION Information such as data error, collection and station are entered by key board.			• DBMS Data base is managed.	
Monthly				• PROGRESS CONTROL Condition of data entry and processing is investigated from data file and the result is summarized, displayed and printed out.	
Half of Year		• RATING TABLE Materials for making of rating table are made, displayed, printed out and drawn.		• BACK UP Stored data are duplicated into optical disk to make back up.	
		• DISCHARGE Discharge values are estimated from water level and rating table including checking and the results are displayed, printed out and drawn.			
		• PROCESSING DATA CHECKING (2) Processed data are checked independently and the results are displayed, printed out and drawn.			
		• OVERALL CHECKING (1) Processed data are checked totally comparing with data recorded at near gauge.			
Yearly		• SEDIMENT Sediment transportation value is estimated, displayed and printed out	• DATA BOOK Draft for data book is made, displayed, drawn and printed out.		• ANALYSIS Meteorological and hydrological characteristics are analyzed to evaluate system.
		• OVERALL CHECKING (2) Processed data are checked totally comparing with data recorded at near gauges.			• REGISTER Processed data are registered.

Table 3.1 DISTRIBUTION OF POST OFFICES

	Name of Area	Number of Post Offices	Area (km^2)	Distribution (km^2/number)
(1)	Eastern Region			
	1) Mechi Zone	129	8,196	64
	2) Koshi Zone	180	9,669	54
	3) Sagarmatha Zone	160	10,591	66
	Sub-total	469	28,456	61
(2)	Central Region			
	1) Janakpur Zone	188	9,669	51
	2) Bagmati Zone	246	9,428	38
	3) Narayani Zone	144	8,313	58
	Sub-total	578	27,410	47
(3)	Western Region			
	1) Lumbini Zone	173	8,975	52
	2) Gandaki Zone	174	12,275	71
	3) Dhaulagiri Zone	110	8,148	74
	Sub-total	457	29,398	64
(4)	Mid Western Region			
	1) Rapti Zone	113	10,482	93
	2) Bheri Zone	92	10,545	115
	3) Karnali Zone	76	21,351	281
	Sub-total	281	42,378	151
(5)	Far Western Region			
	1) Seti Zone	105	12,550	120
	2) Mahakli Zone	132	6,989	53
	Sub-total	237	19,539	82
	Whole of Nepal	2,022	147,181	73

Source : STATISTICAL YEAR BOOK OF NEPAL 1989

Table 3.2 COMPUTER SYSTEMS FROM UNDP/WMO PROJECT

Place	Instrument	Name	Quan-tity	Memory	Hard Disk	Monitor	MPU	Adapter	Others
Kathmandu	Computer	IBM PC AT	1	512 KB	30 MB	Color	i 80286	Two serial-parallel	
Kathmandu	Computer	IBM PC XT	1	512 KB	No	Monocrome	i 8088	Two serial	Herculas graphic card
Kathmandu	Computer	Victor 9000	2	256 KB	No	Monocrome	?	One parallel/Two serial each	
Kathmandu	Streamer tape	Sigma	1	60 MB	-	-	-	-	
Kathmandu	Printer	Epson LQ-1000	1	-	-	-	-	-	Dot matrix
Kathmandu	Printer	Silver-Reed Exp-770	1	-	-	-	-	-	
Kathmandu	Plotter	DMP-42	1	-	-	-	-	-	
Kathmandu	Digitizer	-	1	-	-	-	-		Hosten Instruments
Dharan	Computer	IBM PC XT	1	256 KB	No	Monocrome	i 8088	?	
Dharan	Printer	Epson FX-80	1	-	-	-	-	-	Dot matrix
Pokhara	Computer	IBM PC XT	1	256 KB	No	Monocrome	i 8088	?	
Pokhara	Printer	Epson LQ-1000	1	-	-	-	-	-	Dot matrix

Table 4.1 WORKS OF DIVISIONS (1/2)

DIVISION	ITEM OF WORK
Hydrology Division	- Report preparation and publication of study and analysis of different hydrological aspects: o Periodical collection, evaluation and analysis of hydrological data of the water resources including the rivers within the boundary of the country. - Development of different types of hydrological models including analysis of regional hydrology for long term development and implementation of water resources. - Study of basic models which are necessary for flood forecasting. - Study of environmental imbalance survey of glaciers in Himalayan region,
Other Technical Services Section	- Construction, operation and maintenance of observation centres. o Instrument maintenance workshop. - Data collection processing and management of computer. - Chemical laboratory: o Sediment analysis, o Chemical analysis of water and analysis of river pollution, o Analysis of air pollution and data collection of different environmental aspects. - Training and cooperation with WMO, SAARC countries and other countries.
Administrative and Accounts Section	- Administration for staff and internal and public administration. - Preparation and use of office budget. - Auditing. - Supervision of financial administration and preservation of office property.
Regional Offices	- Establishment of observation centres, their operation and maintenance and minor maintenance , and minor maintennce of instruments. - Data collection and primary processing. - Data collection for study of different environmental aspects. - Connection with centre.

Source : DHM

Table 4.1 WORKS OF DIVISIONS (2/2)

DIVISION	ITEM OF WORK
Climatology Division	- Study, analyses and preparation of reports of different climatological aspects: o Publication of report and analyzed data, o Preparation of the special reports, which will be useful for agriculture, water resources, transportation, health, tourism and planning etc, o Classification of the country into different climatological regions. - Provide necessary services to agriculture: o Make available the climatological informations including forecasts to farmers, which are necessary for planning their long term programmes, o Make alert about the bad effects of weather in agriculture. - Longterm study of climate and prepare informations about the previous and possible changes of climate and their effects in environment.
Meteorology and Weather Forecasting Division	- Weather forecasting: o Provide weather forecasts and necessary information about weather to civil aviation, tourism, mountaineering and public sectors, o Periodical study of climate and information to the people about the possible bad weather. - Storm and flod warning. - Establishment of observation centres and making arrangement of information about weather from abroad.

Source : DHM

TABLE 4.2 NUMBER OF STAFF OF REGIONAL OFFICE (1/2)

YEAR : 1991

REGION			FAR-WESTERN					MID-WESTERN				WESTERN		
POST		Level	Regional Office	SYNOPTIC STATION			Hydro Station	Regional Office	SYNOPTIC STATION			Regional Office	SYNOPTIC STATION	
				Dipa-yal	Dadel dhura	Dhan-Gadhi			Sur-khet	Jumla	Dang		Pokhara	Bhairah-hawa
1. Senior Hydrologist		TG2	0	0	0	0	0	1*	0	0	0	1*	0	0
2. Senior Meteorologist		TG2	1	0	0	0	0	0	0	0	0	0	0	0
3. Hydrologist		TG3	1(2)	0	0	0	0	1	0	0	0	1	0	0
4. Meteorologist		TG3	0(1)	0	0	0	0	0(1)	0	0	0	1	0	0
5. Senior Hydro-meteoroligcal Assistant		TNG1	3(4)	1	1	1	1	2	1	1	1	3	1	1
6. Silt Analysist		TNG1	0	0	0	0	0	1	0	0	0	1	0	0
7. Junior Hydro. Meteo. Assistant		TNG2	3(1)	1	0(1)	1	2(3)	1(4)	1	1(3)	1(3)	4(7)	0(1)	1
8. Field Assistant		TNG3	2	1	1	1	1	3	1	1	1	3	1	1
9. Lab. Boy		TNG4	0	0	0	0	0	1	0	0	0	1	0	0
(Technitian)	ACTUAL		10	3	2	3	4	10	3	3	3	15	2	3
SUB TOTAL	CAPACITY		16	3	3	3	5	14	3	5	5	18	3	3
1. Driver		-	0(1)	0	0	0	0	1	0	0	0	1	0	0
2. Senior Administration Assistant		ANG1	1	0	0	0	0	1	0	0	0	1	0	0
3. Senior Store Assistant		ANG1	0	0	0	0	0	0	0	0	0	0	0	0
4. Accountant		ANG1	1	0	0	0	0	1	0	0	0	1	0	0
5. Administration Assistant		ANG2	0	0	0	0	0	1	0	0	0	1	0	0
6. Assistant Accountat		ANG2	0	0	0	0	0	0	0	0	0	0	0	0
7. Store Assistant		ANG2	0(1)	0	0	0	0	0(1)	0	0	0	0(1)	0	0
8. Typist		ANG3	1(2)	0	0	0	0	0(1)	0	0	0	0(1)	0	0
9. Peon		-	5	0	0	0	2	0(1)	0	0	0	1	0	0
10. Chowkidar		-	1	1	1	1	2	2	1	1	1	2	1	1
TOTAL	ACTUAL		19	4	3	4	8	16	4	4	4	22	3	4
	CAPCITY		28	4	4	4	9	23	4	6	6	27	4	4
German Volunteer			0	0	0	0	0	1	0	0	0	1	0	0

NOTE: ( ) : Number of capacity
* : Act for

Level : T : Technitian
G : Gazetted
NG : Non Gazetted

Source : DHM

TABLE 4.2 NUMBER OF STAFF OF REGIONAL OFFICE (2/2)

YEAR : 1991

REGION			CENTRAL		EASTERN					
POST		Level	Regional Office	Synoptic Station (Stream)	Regional Office	SYNOPTIC STATION				Total
						Dhan-kuta	Okhal-dhunga	Taple-jung	Biratnagar	
1. Senior Hydrologist		TG2	0	0	1*	0	0	0	0	3
2. Senior Meteorologist		TG2	1	0	0	0	0	0	0	2
3. Hydrologist		TG3	1	0	1	0	0	0	0	5(6)
4. Meteorologist		TG3	1	0	1	0	0	0	0	3(5)
5. Senior Hydro-meteoroligcal Assistant		TNG1	3	1	5(6)	1	1	0(1)	1	29(32)
6. Silt Analysist		TNG1	0	0	1	0	0	0	0	3
7. Junior Hydro. Meteo. Assistant		TNG2	5	0(1)	3(8)	1	1(2)	1	1	28(51)
8. Field Assistant		TNG3	2	1	2(3)	1	1	1	1	26(21)
9. Lab. Boy		TNG4	0	0	1	0	0	0	0	3
(Technitian)	ACTUAL		13	2	15	3	3	2	3	102
SUB TOTAL	CAPACITY		13	3	22	3	4	3	3	132
1. Driver		-	0	0	1	0	0	0	0	3(4)
2. Senior Administration Assistant		ANG1	1	0	0(1)	0	0	0	0	4(5)
3. Senior Store Assistant		ANG1	1	0	0	0	0	0	0	1
4. Accountant		ANG1	1	0	1	0	0	0	0	5
5. Administration Assistant		ANG2	1	0	0	0	0	0	0	3
6. Assistant Accountat		ANG2	0	0	1	0	0	0	0	1
7. Store Assistant		ANG1	1	0	2	0	0	0	0	3(6)
8. Typist		ANG3	0(1)	0	0(1)	0	0	0	0	1(6)
9. Peon		-	1	0	1	0	0	0	0	10(11)
10. Chowkidar		-	2	1	1(3)	1	1	1	1	23(25)
TOTAL	ACTUAL		21	3	22	4	4	3	4	156
	CAPCITY		22	4	33	4	5	4	4	199
German Volunteer			1	0	1	0	0	0	0	4

NOTE: ( ) : Number of capacity
* : Act for

Level : T : Technitian
G : Gazetted
NG : Non Gazetted

Source : DHM

TABLE 4.3 NUMBER OF STAFF AT CENTRAL OFFICE

	Position		Level	OTHERS	Foreca-sting Division	Meteoro-logical Division	Hydro-logical Division	Other Technical Services	Snow & Glacier	Total
1	Director General		TGI	1	0	0	0	0	0	1
2	Chief Forecastor		TGI	0	1	0	0	0	0	1
3	Chief Meteorologist		TGI	0	0	1	0	0	0	1
4	Chief Hydrologist		TGI	0	0	0	1	0	0	1
5	Senior Meteorolgist		TGII	0	1	2	0	1	0	4
6	Senior Hydrologist		TGII	0	0	0	2	0	1 *	3
7	Senior Electrical Engineer		TGII	0	0 (1)	0	0	0	0	0 (1)
8	Divisional Hydrologist		TGII	0	0 (1)	0	1 (4)	0	1	2 (6)
9	Divisional Meteorologist		TGII	0	5	0	0	1	0	6
10	Divisional Chemist		TGII	0	0	0	0	1	0	1
11	Divisional Electrical Engineer		TGII	0	0 (2)	0	0	0	0	0 (2)
12	Meteorologist		TGIII	0	3 (9)	3 (6)	0	1 (2)	1	8 (18)
13	Hydrologist		TGIII	0	0	0	1 (6)	1 (2)	1	3 (9)
14	Electrical Engineer		TGIII	0	1	0	0	0	0	1
15	Chemist		TGIII	0	0	0	0	2	0	2
16	Statistist		TGIII	0	0	0	0	1	0	1
17	Senior Hydro-Meteorological Assist.		TNGI	0	21 (24)	0	0	3	8	32 (35)
18	Senior Meteorological Assistant		TNGI	0	0	9 (14)	0	0	0	9 (14)
19	Senior Hydrological Assistant		TNGI	0	0	0	11 (12)	0	0	11 (12)
20	Data Supervisor		TNGI	0	0	0	0	1	0	1
21	Overseer		TNGI	0	0	0	0	2	0	2
22	Draftman		TNGI	0	0	0	0	2	0	2
23	Junior Hydro-Meteorological Assist.		TNGII	0	7 (8)	0	0	5	0	12 (13)
24	Administration ClerK		TNGII	0	0 (1)	0	0	0	0	0 (1)
25	Lab. Technician		TNGII	0	0	0	0	2	0	2
26	Assist Data Pancher		TNGII	0	0	0	0	1 (2)	0	1 (2)
27	Assistant		TNGIII	0	1	0	0	0	0	1
28	Field Assistant		TNGIII	0	0	0	0	0	4 (6)	4 (6)
29	Instrument Mechanist		TNGIII	0	0	0	0	5	0	5
30	Junior Assistant		TNGIII	0	0	0	0	2	0	2
31	Junior Data Pancher		TNGIII	0	0	0	0	2	0	2
	(Technician)	ACTUAL		1	40	15	16	33	16	121
	SUB-TOTAL	CAPACITY		1	55	23	25	36	18	158
32	Divisional Administration Officer		AGII	1	0	0	0	0	0	0
33	Administration Officer		AGIII	1	0	0	0	0	0	0
34	Accountant		AGIII	1	0	0	0	0	0	0
35	Senior Assistant Accountant		ANGI	4	0	0	0	0	0	0
36	Store Assistant		ANGI	1	0	0	0	0	0	0
37	Junior Accountant		ANGI	2	0	0	0	0	0	0
38	Typist		ANGI	3	0	0	0	0	0	0
39	Administration Assistant		ANGII	1 (2)	0	0	0	0	0	0
40	Store Assistant		ANGII	1	0	0	0	0	0	0
41	Assistant Accountant		ANGII	1	0	0	0	0	0	0
42	Administration Assistant		ANGIII	2	0	0	0	0	0	0
43	Peon/Chawkidar/Kuchikar		-	16	7	0	0	0	0	0
	TOTAL	ACTUAL		35	47	15	16	33	16	162
		CAPACITY		36	62	23	25	36	18	200

Note ( ) : Number of capacity
* : Act for
Level T : Technitian
A : Administraie and acountant staff
G Gazetted
NG Non gazetted

Soerce : DHM

TABLE 4.4 NUMBER OF SOLD DATA BOOK

DATA BOOK	NUMBER OF SOLD DATA BOOK										UNIT COST (NRs.)	TOTAL (NRs.)	NUMBER OF PUBLISHED
	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	TOTAL	MEAN			
1921-1975 (II)	59	31	31	27	37	35	34	28	282	35	30	8,460	?
1971-1975 (I)	51	49	37	38	50	23	45	31	319	40	60	19,140	?
1976-1980	100	63	87	55	47	55	40	36	483	60	125	60,375	978
1981-1982	-	-	75	60	47	78	46	33	339	60	70	23,730	994
1983-1984	-	-	-	16	96	80	54	50	296	59	100	29,600	998
1985-1986	-	-	-	-	33	121	89	60	303	76	150	45,450	1,000
1976-1984	-	-	-	21	61	65	76	38	261	58	25	6,525	1,000
TOTAL	210	138	230	217	371	457	384	276	2,283	-	-	193,280	-

Source : DHM

TABLE 4.5 PUBLISHED HYDROLOGICAL DATA BOOK

S.N.	NAME OF BOOK	PUBLISHED	PUBLISHED ORGANIZATION
1.	Surface Water Recors of Nepal Through December 31, 1965	19th February 1967	Hydrological Survey Department, His Majesty's Government of Nepal in Co-Operation with United States Agency for International Development Mission to Nepal
2.	Surface Water Process of Nepal Supplement No. 1, 1966	20th June 1967	Hydrological Survey Department, His Majesty's Government of Nepal in Co-operation with United States Agency for International Development Mission to Nepal.
3.	Surface Water Process of Nepal Supplement No. 2, 1967	13th April 1968	Department of Hydrology and Meteorology, Ministry of Water and Power, His Majesty's Government of Nepal in Co-operation with United States Agency for International Development to Nepal.
4.	Surface Water Process of Nepal Supplement No. 3, 1968	20th Oct. 1969	Department of Hydrology and Meteorology Ministry of Water and Power. His Majestys Government of Nepal.
5.	Surface Water Process of Nepal Supplement No. 4, 1969	16th April 1972	Department of Hydrology and Meteorology, Minisltry of Water and Power, His Majesty's Government of Nepal
6.	Surface Water Process of Nepal Supplement No. 5, 1971	28th June 1972	Department of Hydrology and Meteorology Ministry of Water and Power, His Majesty's Government of Nepal.
7.	Surface Water Process of nepal Supplement No. 6, 1971	13th April 1973	His Majesty's Government of Nepal, Ministry of Food, Agriculture and Irrigation, Department of Irrigation Hydrology and Meteorology Kathmandu.
8.	Surface Water Process of Nepal Supplement No. 7, 1972	27th June 1974	His Majesty's Government of Nepal, Ministry's of Food, Agriculture and Irrigation, Department of Irrigation, Hydrology and Meteorology, Kathmandu
9.	Surface Water Process of Nepal Supplement No. 8, 1973	April-May 1979	His Majesty's Government of Nepal, Ministry of Food, Agriculture and Irrigation, Department of Irrigation, Hydrology and Meteorology, Kathmandu.
10.	Surface Water Process of Nepal, Supplement No. 9, 1974	14th June 1980	His Majesty's Government of Nepal, Ministry of Water Resources, Department of Irrigation, Hydrology and Meteorology, Kathmandu
11.	Surface Water process of nepal, Supplement No. 10, 1975	19th February 1983	His Majesty's Government of Nepal, Ministry of Water Resources, Department of Irrigation Hydrology and Meteorology, Kathmandu
12.	Surface Water Process of Nepal, Supplement No. 11, 1976	7th Nov. 1984	His Majesty's Government of Nepal, Ministry of Water Resources, Department of Irrigation, Hydrology and Meteorology, Kathmandu

TABLE 4.6 PUBLISHED CLIMATOLOGICAL DATA BOOK

S.N.	NAME OF BOOK	PUBLISHED	PUBLISHED ORGANIZATION
1.	Climatological Records of Nepal 1966	1st Oct. 1968	Department of Hydrology and Meteorology, Kathmandu
2.	Climatological Records of Nepal, 1967 and 1968	14th Malrch 1971	Department of Hydrology and Meteorology, Kathmandu
3.	Climatological Records of Nepal, 1969	19th February 1972	Department of Hydrology and Meteorology, Kathmandu
4.	Climatological Records of Nepal, 1970	18th February, 1973	Department of Irrigation, Hydrology and Meteorology, Kathmandu
5.	Climatological Records of nepal, 1971-1975 Volume - I	June 1977	Department of Irrigation, Hydrology and Meteorology, Kathmandu
6.	Climatological Records of Nepal, 1976-1980 Volume - I	December 1982	Department of Irrigation Hydrology and Meteorology, Kathmandu
7.	Climatological Records of Nepal, 1981 and 1982 Volume-I	July 1984	Department of irrigation, Hydrology and Meteorology, Kathmandu
8.	Climatological Records of Nepal, 1983-1984 Volume - I	September 1986	Department of irrigation, Hydrology and Meteorology, Kathmandu
9.	Climatological Recors of Nepal, 1985-1986	Frbruary 1988	Department of Irrigation Hydrology and Meteorology, Kathmandu
10.	Precipitaton Records of Nepal 1987-1990	July 1992	Department of Hydrology and Meteorology; Kathmandu

TABLE 4.7 DATA FILES ON THE IBM PC AT

NAME	TYPE OF DATA	LOGICAL RECORD LENGTH	TOTAL NUMBER OF RECORDS HEADER + DATA
BASI.DAT	Station description for all stations	242	6 + NST
RT_st.No.	All rating tables for one station	248	5 + (3 * NRT)
DM-st.No	Discharge Measurement data for one station	86	27 + NDM
DGH_yy.DAT	Mean daily gauge height data for one year	246	6 + (10 * NST)
DFL-yy.DAT	Mean daily discharge data for one year	246	6 + (10 * NST)
GHT-yy.DAT	Staff gauge readings for one year	252	6 + (18 * NST)
HGH_yy.DAT	Hourly water level data for one year	48	9 + (366 * NST)
DPPM_yy.DAT	Mean daily sediment concentration for one year	246	6 + (10 * NST)
DSFL_yy.DAT	Mean daily sediment transport for one year	246	6 + (10 * NST)
YRBSED.DAT	All mean, max., min. monthly sediment transport data and extremes	221	4 + NST*(1991-YRS)
SEDN_yy.DAT	Notes to sediment yearbook publication for one year	240	1 + NST
YRBS_st.no	ASCII file with mean, max., min., monthly sed., tr. and extremes for all years and for one station	Var.	Sequential ASCII data file
WINVENT.DAT	Inventory of all mean daily water level data	120	19 + NST
QINVENT.DAT	Inventory of all mean daily discharge data	120	19 + NST
PINVENT.DAT	Inventory of all mean daily sediment concentration data	120	19 + NST
SINVENT.DAT	Inventory of all mean daily sediment transport data	120	19 + NST

Note: yy = Last two digits of year
st.no = Station number
NST = Total number of stations in the data file
NRT = Total number of rating tables in the data file
NDM = Total number of discharge measurements in the data file
YRS = Starting year of data in YRBOOK.DAT or YRBSED.DAT file

Source : User's Manual Hydrological Data Base
Department Hydrology and Meteorology
UNDP/WMO Project Development of Operational Hydrological Services

TABLE 4.8 DATA FILES ON THE IBM PC-XT

NAME	TYPE OF DATA	LOGICAL RECORD LENGTH	TOTAL NUMBER OF RECORDS HEADER + DATA
BASI.DAT	Station description for all stations	242	6 + NST
BASID.DAT	Station description for all stations under Dharan Field Office	242	6 + NST
BASIP.DAT	Station description for all stations under Pokhara Field Office	242	6 + NST
RT_st.No.	All rating tables for one station	248	5 + (3 * NRT)
DM_st.no	Discharge Measurement data for one station	86	27 + NDM
DDM_st.no	Discharge Measurement data for one station under Dharan Field Office	86	27 + NDM
PDM_st.no	Discharge Measurement data for one station under Pokhara Field Office	86	27 + NDM
Wyy_st.no	Mean daily gauge height data for one station-year	246	10
Qyy_st.no	Mean daily discharge data for one station-year	246	10
Kyy_st.no	Staff gauge readings for one station-year in Kathmandu	252	18
Dyy_st.no	Staff gauge readings for one station-year in Dharan Field Office	252	18
Pyy_st.no	Staff gauge readings for one station-year in Pokhara Field Office	252	18
Hyy_st.no	Hourly water level data for one statio-year	48	1 + 366
DPPM_yy.DAT	Mean daily sediment concentration for one year	246	6 + (10 * NST)
DSFL_yy.DAT	Mean daily sediment transport for one year	246	6 + (10 * NST)
YRBSED.DAT	All mean, max., min., monthly sediment transport data and extremes	221	s4 + NST*(1991-YRS)
SEDN_yy.DAT	Notes to sediment year book publication for one year	240	1 + NST

Note: yy = Last two digits of year
st.no = Station number
NST = Total number of stations in the data file
NRT = Total number of rating tables in the data file
NDM = Total number of discharge measurements in the data file
YRS = Starting year of data in YRBOOK.DAT or YRBSED.DAT file

Source : User's Manual Hydrological Data Base
Department Hydrology and Meteorology
UNDP/WMO Project Development of Operational Hydrological Services

TABLE 4.9 STRUCTURE OF HYDROLOGICAL DATA BASE (1/4)

Name of Programme	Function	Menu
HYDRO (Main program)	- Program for data entry and processing	MAIN MENU Give: for PROGRAM 1. For station description, r.t. and d.m. TABLE 2. For mean daily stages and discharges FLOWS 3. For staff gauge readings NEWHYDRO 4. For hourly water level WLHOUR 5. For discharge year book publication YRBOOK 6. For mean daily sediment data SEDIMENT 7. For sediment year book publication YRBASED 8. For plotting of mean daily data PLOT 9. For inventory of mean daily data INVENT 10. To read/write Victor or XT files DBIO 11. For digitizing ..... 12. To quit Key in your choice [1 .....12] ? For digitizing (option 11) the following menu is available Give: 1. Digitize (basin) area, length etc. DTOPOAT 2. Digitize water level recorder chart DHYDRAT 3. Return to main menu
TABLE	Enter, edit and/or print: a) station description data b) rating table data for editing stage-discharge relation c) discharge measurements (d.m.)	PRINT BASIC STATION DESCRIPTION FOR: 1. All stations in Nepal 2. All stations under Chisapani 3. All stations under Nepalganj 4. All stations under Pokhara 5. All stations under Kathmandu 6. All stations under Dharan 7. All stations with water level recorders 8. All stations with a cable way 9. All sediment stations 10. All given station numbers 11. Return to the menu. Key in your choice [1..... 11] ? Enter: ** Serial No. ** P to print summary ** Q to quit ** ** O to put in sequential time order ** ? Give meter no to change or M to return to menu ? OPTIONS: 1. Enter/edit d.m. 2. Display d.m. data 3. Display d.m. numbers 4. Change d.m. numbers 5. Delete d.m. 6. Print all discharge measurements 7. Return to main menu. Option 2. Press * N for next d.m. * O for other d.m. * M to return to menu *
FLOWS	Enter, edit (compute) and/or print: a) Mean daily water level data (enter, edit, print or draw mean daily gauge height data) b) Mean daily discharge (Compute, edit, print or draw mean daily discharge data) c) Extreme discharges (edit maximum and minimum instantaneous discharges)	EDIT, PRINT OR DRAW MEAN DAILY GAUGE HEIGHT DATA Give: 1. To edit mean daily gauge heights 2. To print mean daily gauge heights in year book form 3. To display mean daily gauge heights on the screen 4. To display stations for which data has been entered 5. To draw hydrograph 6. To return to the main menu Give: 1. To compute mean daily discharges 2. To print mean daily discharges in year book form 3. To edit mean daily discharges 4. To display mean daily discharges on the screen 5. To display stations in discharge file 6. To draw hydrograph 7. To return to main menu Give: 1. To edit annual instantaneous discharges 2. To read the extremes from YRBOOK.DAT file 3. To display extremes 4. To return to the main menu

TABLE 4.9 STRUCTURE OF HYDROLOGICAL DATA BASE (2/4)

Name of Programme	Function	Menu
NEWHYDRO	Enter, edit and/or print staff gauge readings (Print daily mean of the staff gauge readings or transfer to the main daily water level file)	Give: 1. Enter or edit staff gauge readings 2. Print staff gauge readings 3. Print mean daily water level data 4. Store mean of staff gauge readings in DGH__YY.DAT file 5. List stations for which data have been entered 6. Quit Program. Key in your choice [1 ..... 6] ?
WLHOUR	Enter, edit and/or print hourly water level data (The daily mean of the hourly water level can be printed and/or transferred to the mean daily water level file).	Give: 1. Enter or edit hourly water level 2. Print/list hourly water level 3. Print/list mean daily water level data 4. Store mean of hourly water level in DGH_YY.DAT file 5. List stations for which data have been entered 6. Quit the program Keys in your choice [1 ..... 6] ?
YRBOOK	Edit and/or print - mean, maximum and minimum monthly discharge data - maximum and minimum instantaneous discharges - long term average of discharges - publication of surface water records of Nepal - writing of ASCII data files with all monthly, yearly and instantaneous discharge data	Main Menu: Give: 1. To edit data 2. To list all stations in the file 3. To print in year book format 4. To list summary for one station-year 5. To print mean., max., min. and extreme for all years 6. To update yearbook file from DFL_YY.DAT file 7. To change the starting year for a station 8. To quit the program
		Submenu for EDIT Give: 1. To edit mean monthly data 2. To edit max. daily data 3. To edit min. daily data 4. To edit max. instantaneous data 5. To edit min. instantaneous data 6. To edit remarks 7. To edit all data (1-6) 8. To edit notes 9. To change the year 10. To return to the main menu Sub menu for PRINT Give: 1. To print mean discharges 2. To print max. discharges 3. To rpint min. discharges 4. To print mean, maximum and minimum discharges 5. To print extreme instantaneous discharges 6. To write ASCII files with all discharges 7. To return to main menu
SEDIMENT	Enter, edit (Compute) and/or print: - mean daily sediment concentration data [ppm] - mean daily sediment transport data (tons/day) (compute, edit, print or draw mean daily discharge data) - extreme discharges (edit max. and min. instantaneous discharges)	Give: 1. To edit mean daily sediment concentration 2. To print mean daily sediment concentration in year book form 3. To display mean daily sediment concentration on the screen 4. To display stations for which data has been entered 5. To draw a hydrograph 6. To return to main menu. Give: 1. To compute mean daily sediment transport 2. To print mean daily sediment transport in year book form 3. To edit mean daily sediment transports 4. To display mean daily sediment transports on the screen 5. To display stations in sediment transport files 6. To draw hydrograph 7. To return to the main menu. Give: 1. To edit annual instantaneous sediment transports 2. To read the extremes from YRBSED.DAT file 3. To display extremes 4. To return to the main menu

TABLE 4.9 STRUCTURE OF HYDROLOGICAL DATA BASE (3/4)

Name of Programme	Function	Menu
YRBSED	Edit and/or print - mean, maximum and minimum monthly sediment transport data - maximum and minimum and instantaneous sediment transport - long term average of sediment transports - writing of ASCII data files with all monthly yearly and instantaneous sediment transport data.	Main Menu: Give: 1. To edit data 2. To list all stations in the file 3. To print in sediment year book format 4. To list summary for one station year 5. To print mean, min, max. and extreme for all years 6. To update sediment year book file from DFL_yy.DAT file 7. To change starting year for a station 8. To quite the program Submenu for EDIT Give: 1. To edit mean monthly data 2. To edit max. daily data 3. To edit mean daily data 4. To edit max. instantaneous data 5. To edit min. instantaneous data 6. To edit all remarks 7. To edit all data Submenu for PRINT Give: 1. to print mean sediment transport 2. To print maximum sediment transport 3. To print minimum sediment transport 4. To print mean, maximum and minimum sediment transport 5. To print extreme instantaneous sediment transport 6. To write ASCII file with all sediment transports 7. To return to main menu.
INVENT	To keep an inventory of all the mean daily data in the data base. A check in made if for a certain year-station, all data, no data or part of the data are entered.	Inventory program options are: 1. Inventory of mean daily water level 2. Inventory of mean daily discharge 3. Inventory of mean sediment concentration (ppm) 4. Inventory of mean sediment transport Submenu for 2, i.e., mean daily discharge. Option are: 1. Update mean daily discharge inventory 2. Print for one station 3. Print all stations for one year 4. Print complete mean daily discharge summary 5. Quit the program.
DBIO	Data Base Input and Output is used to read and write data from/to data base	PROGRAM FOR IN-AND OUTPUT OF VICTOR OR XT FILES FROM THE MAIN DATA BASE FILES ON THE IBM PC AT Give: 1. To write Victor/XT data files 2. To read data from Victor/XT data files 3. To quit program. Menu for Option 1 Give: 1. To write staff gauge file — Kyy_st.no 2. To write mean daily gauge height — Wyy_st.no 3. To write mean daily discharge file — Qyy_st.no 4. To write hourly water level file — Hyy_st.no 5. To write discharge measurement file — KDM_st.no 6. To return to the main menu. Menu for Option 2 1. Read from staff gauge file 2. Read from mean daily gauge height 3. Read from mean daily discharge file 4. Read from hourly water level file 5. Read from discharge measurement file 6. To return to the main menu.
INITIAL	- Initialize data files	Options: 1. Initialize a staff gauge file 2. Initialize a mean daily gauge height file 3. Initialize a mean daily discharge file 4. Initialize a mean daily concentration (ppm) file 5. Initialize a mean daily sediment transport file 6. Initialize an hourly water level file 7. Quit the program Keys in your choice [1 ..... 7] ?

TABLE 4.9 STRUCTURE OF HYDROLOGICAL DATA BASE (4/4)

Name of Programme	Function	Menu
SORTBAS1	- to put the station numbers in BAS1.DAT file in sequential order	-
CRBAS1FO	- To create station description files for the different field offices.	Options: 1. Chisapani field office BAS1C.DAT 2. Nepalganj field office BAS1N.DAT 3. Pokhara field office BAS1P.DAT 4. Kathmandu field office BAS1K.DAT 5. Dharan field office BAS1D.DAT 6. Quit the program Key in your choice [1 ..... 6] ?

Table 4.10 METEOROLOGICAL DATA COLLECTION AT REGIONAL OFFICE (1 / 3)

INDEX	STATION'S NAME	TYPE OF STATION	YEAR 1991												
			ARRIVING DATE AT REGIONAL OFFICE						HOW MANY DAYS DID IT TAKE TO COLLECT DATA						AVERAGE
			JAN	FEB	MAR	APR	MAY	JUN	JAN	FEB	MAR	APR	MAY	JUN	DAYS
101	KAKERPAKHA	PRECIPITATION													
102	BAITADI	PRECIPITATION													
103	PATAN (WEST)	CLIMATOLOGY													
104	DANDELDHURA	SYNOPTIC													
105	MAHENDRA NAGAR	AGROMETEOLOGY													
106	BELAURI SANTIPUR	PRECIPITATION													
107	DARCHULA	CLIMATOLOGY													
108	SATBANJH	PRECIPITATION													
201	PIPALKOT	PRECIPITATION													
202	CHAINPUR (WEST)	CLIMATOLOGY													
203	SILGADHI DOTI	CLIMATOLOGY													
204	BAJURA	PRECIPITATION													
205	KATAI	PRECIPITATION													
206	ASARA GHAT	PRECIPITATION													
207	TIKAPUR	CLIMATOLOGY													
208	SANDEPANI	PRECIPITATION													
209	DHANGADHI	CLIMATOLOGY													
210	BANGOA CAMP	CLIMATOLOGY													
211	KHAPTAD	PRECIPITATION													
212	SITAPUR	PRECIPITATION													
214	KOLA GAUN	PRECIPITATION													
215	GODAVARI (WEST)	CLIMATOLOGY													
217	MANGALSEN	PRECIPITATION													
218	DIPAYAL (DOTI)	SYNOPTIC													
219	DHANGADHI	SYNOPTIC													
301	MUGU	PRECIPITATION	3/26	3/26	4/26	5/21	7/4		55	26	25	21	34		32
302	THIBRU	PRECIPITATION	4/7	4/7	5/17				67	38	51				52
303	JUMLA	SYNOPTIC	4/6	4/6	4/6	5/17	6/3	7/9	66	37	6	17	3	9	23
304	GUTHICHAUR	PRECIPITATION	3/17	3/26	4/21	5/30	7/4		46	26	21	47	16		31
305	SHERI GHAT	PRECIPITATION	3/27	4/11	4/11	6/16	6/16		56	42	11	47	16		34
306	GAM SHREE NAGAR	PRECIPITATION	3/26	4/11	5/9	5/30	7/4		55	42	39	30	34		40
307	RARA	CLIMATOLOGY	6/16	7/4	4/9	5/13	6/10		137	126	9	13	10		59
308	NAGMA	PRECIPITATION	3/27	4/2	6/19	6/19	6/19		56	33	80	50	19		48
309	BIJAYAPUR (RASKOT)	PRECIPITATION	3/17			6/4	7/10		46			35	40		40
310	DIPAL GAUN	CLIMATOLOGY	3/17	3/21	4/21	5/19	6/21		46	21	21	19	21		26
311	SIMIKOT	CLIMATOLOGY													
312	DUNAI	CLIMATOLOGY	5/14	5/14	5/14	5/14			104	75	44	14			59
313	DARMA	PRECIPITATION	2/24	3/26	4/11	5/16	6/10	7/10	24	26	11	16	10	10	16
401	PUSMA CAMP	CLIMATOLOGY	2/25	5/9	5/9	5/9			25	70	39	9			36
402	DAILEKH	CLIMATOLOGY	2/14	3/17	4/5	5/9	6/9		14	17	5	9	9		11
403	JAMU (TIKUWA KUNA)	PRECIPITATION	2/17		4/16	5/19	7/4		17		16	19	34		22
404	JAJARKOT	PRECIPITATION	7/9	7/9	7/9	7/9	7/9		160	131	100	70	39		100
406	SURKHET (BIRENDRA NAGAR)	SYNOPTIC													
407	KUSUM	PRECIPITATION	3/26	3/26		6/10			55	26		41			41
408	GULARIYA	PRECIPITATION	4/2	4/2	5/26	5/26	6/21		62	33	56	26	21		40
409	KHAJURA (NEPALGANJ)	AGROMETEOLOGY					7/4						34		34
410	BALE BUDHA	PRECIPITATION	3/17	3/17	4/10	5/16	6/9	7/7	46	17	10	16	9	7	18
411	RAJAPUR	PRECIPITATION	3/26	5/2	5/2	6/10	7/4		55	63	32	41	34		45
412	NAUBASTA	PRECIPITATION	3/29	3/29					58	29					44
413	SHYANO SHREE	PRECIPITATION	3/26	5/27	5/27	5/27			55	88	57	27			57
414	BAIJAPUR	PRECIPITATION	3/21	3/21					50	21					36
415	BARGADAHA	PRECIPITATION	5/30	5/30	5/30	5/30	7/4		120	91	60	30	34		67
416	NEPALGUNJ (REG.OFF.)	CLIMATOLOGY	3/17	3/17	5/13	5/13	7/4	7/4	46	17	43	13	34	4	26
417	RANI JARUWA NURSERY	CLIMATOLOGY	2/24	3/26	4/18	5/26	7/4		24	26	18	26	34		26
418	MAINA GAUN (D.BAS)	PRECIPITATION	5/1	5/1	5/1	7/4	7/4		91	62	31	65	34		57
419	SIKTA	AGROMETEOLOGY	3/17		6/4	6/4			46		65	35			49
501	RUKUMKOT	PRECIPITATION	2/24	3/26	4/24	5/26	7/4		24	26	24	26	34		27
502	SHERA GAUN	PRECIPITATION	3/26	4/16	5/22	6/10	7/9		55	47	55	41	39		47
504	LIBANG GAUN	PRECIPITATION	3/26	3/26	4/21	5/22	7/10		55	26	21	22	40		33
505	BIJUWAR TAR	PRECIPITATION	4/7	4/7	7/4	7/4	7/4		67	36	95	65	34		60
507	NAYABASTI (DANG)	PRECIPITATION	2/17	4/16	4/16	6/13	6/13	7/7	17	47	16	44	13	7	24
508	TULSIPUR	CLIMATOLOGY	2/11	4/7	5/9	5/9	6/18		11	38	39	9	18		23
509	GHORAHI (MASINA)	PRECIPITATION	6/16	6/16	6/16	6/16	6/16		137	108	77	47	16		77
510	LOILABAS	PRECIPITATION	2/17	3/26					17	26					22
511	SALYAN BAZAR	CLIMATOLOGY	3/17	4/23	4/23	5/22			46	54	23	22			36
512	LUWAMUULA BAZAR	PRECIPITATION	3/26	3/21	4/21	5/21	6/21		55	21	21	21	21		28
513	CHAUR JHARI TAR	CLIMATOLOGY	2/11	3/15	4/9	5/13	6/10	7/9	11	15	9	13	10	9	11
514	MUSIKOT (RUKUMKOT)	CLIMATOLOGY	2/11	3/15	4/9	5/16	6/13		11	15	9	16	13		13
515	GHORAI	SYNOPTIC	3/21	3/21					50	21					36
601	JOMSOM	CLIMATOLOGY	2/5	3/6	4/3	5/8	6/9	7/5	5	6	3	8	9	5	6
604	THAKMARPHA	AGROMETEOLOGY	2/17	3/19	4/8	5/30	7/5		17	19	8	30	35		22
605	BAGLUNG	CLIMATOLOGY	2/7	3/7	4/8	5/8	6/9		7	7	8	8	9		8
606	TATOPANI	PRECIPITATION	2/11	3/12	6/14	6/14	7/8		11	12	75	45	38		36
607	LETE	PRECIPITATION	2/11	5/1	4/3		6/9		11	62	3		9		21
608	RANIPAUWA (M.NATH)	PRECIPITATION													
609	BENI BAZAR	CLIMATOLOGY	4/9	4/9	4/3	5/11	6/12		69	40	3	11	12		27
610	GHAMI (MUSTANG)	PRECIPITATION													
612	MUSTANG (LOMANGTANG)	CLIMATOLOGY													
613	KARKI NETA	PRECIPITATION	2/13	4/7	4/7	5/30	7/7	7/7	13	38	7	30	37	7	22
614	KUSHMA	CLIMATOLOGY	2/7	3/8	4/7	5/8	6/5	7/8	7	8	7	8	5	8	7
615	BOBANG	PRECIPITATION	2/17	2/19	4/12	5/30	6/12		17	ERROR	12	30	12		18
616	GURJA KHANI	PRECIPITATION	4/3	4/3					63	34					49
619	GHORAPANI	PRECIPITATION	2/24	3/7	4/3	5/8	6/9	7/8	24	7	3	8	9	8	10
620	TRIBENI	PRECIPITATION	2/11	3/8	4/10	5/8	6/9	7/8	11	8	10	8	9	8	9
621	DARBANG	PRECIPITATION	2/14	3/7	4/4	5/8	6/4	7/8	14	7	4	8	4	8	8
622	RANGKHANI	PRECIPITATION	2/13	3/11	4/7	5/13	6/14	7/8	13	11	7	13	14	8	11
701	RIDI BAZAR	PRECIPITATION	2/7	3/11	4/5	5/8	6/9	7/8	11	5	8	9	8		8
703	BUTWAL	CLIMATOLOGY	2/10	3/12	4/15	5/13	6/12	7/8	10	12	15	13	12	8	12
704	BELUWA (GIRWARI)	PRECIPITATION	2/11	3/12	4/12	5/13	6/9		11	12	12	13	9		11
705	BHAIRHAWA AIRPORT	AERONATICAL	2/7	3/8	4/7	5/7	6/9	7/9	7	8	?	?	9	9	8
706	DUMKAULI	AGROMETEOLOGY	2/5	3/5	4/4	5/6	6/5	7/5	6	5	4	6	5	5	5
707	BHAIRHAWA (AGRIC)	AGROMETEOLOGY	2/10	3/10	4/23	5/30	6/14		10	10	23	30	14		17
708	PARASI	PRECIPITATION	2/13	3/12	4/15	5/12	6/14		13	12	15	12	14		13
710	DUMKIBAS	PRECIPITATION	3/22	3/22	4/7	5/17			51	22	7	17			24
715	KHANCHIKOT	CLIMATOLOGY	3/27	4/7	7/5	7/5			56	38	96	66			64
716	TAULIHAWA	CLIMATOLOGY	2/7	3/31	4/5	5/6	6/12	7/8	7	31	5	6	12	8	12
721	PATTHARKOT (WEST)	PRECIPITATION	2/11	3/19	4/12	5/13	7/14		11	19	12	13	44		20
722	MUSIKOT	PRECIPITATION	2/11	3/19	4/15	5/13	6/14		11	19	15	13	14		14
723	BHAGWANPUR	PRECIPITATION	2/11	3/11	4/15	5/13			11	11	15	13			13

Table 4.10 METEOROLOGICAL DATA COLLECTION AT REGIONAL OFFICE (2 / 3)

INDEX	STATION'S NAME	TYPE OF STATION	YEAR 1991												
			ARRIVING DATE AT REGIONAL OFFICE						HOW MANY DAYS DID IT TAKE TO COLLECT DATA						AVERAGE
			JAN	FEB	MAR	APR	MAY	JUN	JAN	FEB	MAR	APR	MAY	JUN	DAYS
725	TAMGHAS	CLIMATOLOGY	2/5	3/8	4/7	5/15	6/9	7/8	5	8	7	15	9	8	9
726	GARAKOT	PRECIPITATION	2/11	6/14	4/8	5/15	6/14		11	106	8	15	14		31
727	LUMBINI	PRECIPITATION	2/3	3/12	4/15	5/8	6/4	7/7	3	12	15	8	4	7	8
728	SIMARI	CLIMATOLOGY	2/15	3/25	4/30	5/8	6/14		15	25	30	8	14		18
801	JAGAT (SETIBAS)	PRECIPITATION	7/8	7/8	7/8	7/8	7/8	7/8	159	130	99	69	38	8	84
802	KHUDI BAZAR	CLIMATOLOGY	2/7	3/10	4/8	5/8	6/9	7/8	7	10	8	5	9	8	8
804	POKHARA AIRPORT	AERONATICAL	2/5	3/3	4/2	5/5	6/6		5	3	2	4	6		4
805	SYANGJA	CLIMATOLOGY	2/5	3/8	4/4	5/6	6/4	7/5	5	8	4	6	4	5	5
806	LARKE SAMDO	PRECIPITATION													
807	KUNCHHA	PRECIPITATION	2/11	3/8	4/5	5/8	6/9		11	8	5	8	9		8
808	BANDIPUR	PRECIPITATION	2/3		5/8	5/8	6/14	7/8	3		38	8	14	8	14
809	GORKHA	AGROMETEOLOGY	2/20	3/10	4/21	5/17	6/12		20	10	21	17	12		16
810	CHAPKOT	CLIMATOLOGY	2/7	3/10	4/11	5/8	6/5	7/5	7	10	11	8	5	5	8
811	MALEPATAN (POKHARA)	AGROMETEOLOGY	5/31	5/31	5/31	5/31			121	92	61	31			76
813	BHADAURE DEURALI	PRECIPITATION	2/11	3/8	4/22	5/30	6/4		11	8	22	30	4		15
814	LUMLE	AGROMETEOLOGY	2/10	3/7	4/8	5/7	6/5	7/7	10	7	8	7	5	7	7
815	KHAIRINI TAR	AGROMETEOLOGY													
816	CHAME	CLIMATOLOGY	2/7	3/8	4/8	5/8	6/12	7/8	7	8	8	8	12	8	9
817	DAMAULI	PRECIPITATION	2/5	3/8	4/4	5/8	6/9	7/5	5	8	4	8	9	5	7
818	LAMACHAUR	PRECIPITATION	2/5	3/8	4/3	5/13	6/9	7/5	5	8	3	13	9	5	7
820	MANANG BHOT	PRECIPITATION	2/14	3/12	4/12	7/8	7/8		14	12	12	69	38		29
821	GHANDRUK	PRECIPITATION	5/8	5/8					98	69					84
823	GHARECHUNGA	PRECIPITATION													
824	SIKLESH	PRECIPITATION	2/13	3/8	4/4	5/17	6/5	7/7	13	8	4	17	5	7	9
826	WALLUNG	PRECIPITATION	2/13	3/19	4/4	5/8	6/16		13	19	4	8	18		12
827	RUMJAKOT	PRECIPITATION	2/11	3/11	4/12	5/13	6/9		11	11	12	13	9		11
902	RAMPUR	AGROMETEOLOGY		A			A								
903	JHAWANI	PRECIPITATION	A	A	A	P									
904	CHISAPANI GADHI	PRECIPITATION	A	A	A	A	P								
905	DAMAN	CLIMATOLOGY	A	A	A	P									
906	HETAUNDA N.F.I.	CLIMATOLOGY	A	A	A	A									
907	AMLEKHGANJ	PRECIPITATION													
909	SIMARA AIRPORT	AERONATICAL													
910	NUGADH	PRECIPITATION	A	A	A	A	P								
911	PARWANIPUR	AGROMETEOLOGY													
912	RAMOLI BAIRIYA	PRECIPITATION	A	A	A	A	P								
915	KARKHU GAUN	PRECIPITATION	A	A	A	P									
917	HETAUNDA (IND.DIS)	PRECIPITATION	A	A	A	A	A								
918	BIRGANJ	PRECIPITATION	A	A	A	A	P								
919	MAKWANPUR GADHI	PRECIPITATION	P	P	A	P									
920	BELUWA	PRECIPITATION	A	A	A	P									
921	KALAIYA	PRECIPITATION	A	A	A	A	P								
922	GAUR	CLIMATOLOGY	A	A	A	A	A								
1001	TIMURE	PRECIPITATION	A	A	A	A	P								
1002	ARU GHAT D. BAZAR	PRECIPITATION		P	P										
1004	NUWAKOT	CLIMATOLOGY	A	A	A	A	P								
1005	DHADING	PRECIPITATION	A	A	A	A	P								
1006	GUMTHANG	PRECIPITATION	A	A	A	A	P								
1007	KAKANI	AGROMETEOLOGY	A	A	A	A	A								
1008	NAWALPUR	PRECIPITATION	A	A	A	P									
1009	CHAUTARA	PRECIPITATION	A	A	A	A	A	A							
1015	THANKOT	PRECIPITATION	A	A	A	P									
1016	SARMATHANG	CLIMATOLOGY	A	A	A	A	P								
1017	DUBACHAUR	PRECIPITATION	A	A	A	A	P								
1018	BAUNEPATI	PRECIPITATION	A	P	P	A	P								
1020	MANDAN	PRECIPITATION	A	A	A	A	A	A							
1022	GODAVARI	CLIMATOLOGY	A	A	A	A	A	A							
1023	DOLAL GHAT	PRECIPITATION	A	A	A	A	P								
1024	DHULIKHEL	CLIMATOLOGY													
1025	DHAP	PRECIPITATION	A	A	A	A	P								
1027	BAHRABISE	PRECIPITATION	A	A	A	P									
1028	PACHUWAR GHAT	PRECIPITATION	A	A	A	A	P								
1029	KHUMALTAR	AGROMETEOLOGY	A		A		A	A							
1030	KATHMANDU AIRPORT	AERONATICAL													
1035	SANKHU	PRECIPITATION	A	A	A	P									
1036	PANCHKHAL	AGROMETEOLOGY	A	A	A		A	A							
1038	DHUNIBESI	CLIMATOLOGY	P	P	A	A	P								
1039	PANIPOKARI (KATHMANDU)	CLIMATOLOGY	A	A	A	A	P								
1043	NAGARKOT	CLIMATOLOGY	A	A	A	A	A	A							
1049	KHOPASI (PANAUTI)	PRECIPITATION	A	A	A	A	P								
1052	BHAKTAPUR	PRECIPITATION	A	A	A	A	A	P							
1054	THAMACHIT	PRECIPITATION	A	A	A	A	P								
1055	DHUNCHE	CLIMATOLOGY	A	A	A	A	P								
1057	PANSAYAKHOLA	CLIMATOLOGY	A	A	A	A	P								
1058	TARKE GHYANG	PRECIPITATION	A	A	A	P									
1059	CHANGU NARAYAN	PRECIPITATION	A	A	A	A	A	P							
1060	CHAPA GAUN	PRECIPITATION	A	A	A	A	A	P							
1062	SANGACHOK	CLIMATOLOGY	A	A	A	A	A	A							
1063	THOKARPA	PRECIPITATION	A	A	A	A	P								
1071	BUDDHANILAKANTHA	CLIMATOLOGY	A	A	A	A	A	A							
1072	PAIGUTANG	CLIMATOLOGY	A	A	A	A	A								
1101	NAGDAHA	PRECIPITATION	A	A	A	A	P								
1102	CHARIKOT	PRECIPITATION	A	P	P	P	P								
1103	JIRI	AGROMETEOLOGY	A												
1104	MELUNG	PRECIPITATION	A	A	A	A	P								
1105	RAMECHHAP	PRECIPITATION	A	A	A	A	P								
1107	SINDHULI GADHI	CLIMATOLOGY	A	A	A	A	A								
1108	BAHUN TILPUNG	PRECIPITATION	A	A	A	A	P								
1109	PATTHARKOT (EAST)	PRECIPITATION	A	A	A	A	P								
1110	TULSI	PRECIPITATION	A	A	A	A	P								
1111	JANAKPUR AIRPORT	CLIMATOLOGY	A	A	A	A	A	A							
1112	CHISAPANI BAZAR	PRECIPITATION	A	A	A	A	A								
1115	NEPALTHOK	PRECIPITATION	A	A	A	A	P								
1117	HARIHARPUR GADHI VALLEY	PRECIPITATION	A	A	A	P									
1118	MANUSMARA	CLIMATOLOGY	A	A	A	A	P								
1119	GAUSALA	PRECIPITATION				P	P								
1120	MALANGWA	PRECIPITATION	A	A	A	A	P								
1121	KARMAIYA	CLIMATOLOGY	A	A	A	A	P								
1122	JALESORE	CLIMATOLOGY	A	A	A	A	P								

Table 4.10 METEOROLOGICAL DATA COLLECTION AT REGIONAL OFFICE (3 / 3)

INDEX	STATION'S NAME	TYPE OF STATION	YEAR 1991												
			ARRIVING DATE AT REGIONAL OFFICE						HOW MANY DAYS DID IT TAKE TO COLLECT DATA						AVERAGE
			JAN	FEB	MAR	APR	MAY	JUN	JAN	FEB	MAR	APR	MAY	JUN	DAYS
1202	CHAURIKHARK	PRECIPITATION	A	A			A	A							
1203	PAKARNAS	PRECIPITATION	A	A	A	A	A	A							
1204	AISEALUKHARK	PRECIPITATION	A	A	A	A	A								
1206	OKHALDHUNGA	SYNOPTIC	A	A	A	A	A	A							
1207	NAME BHANJYANG	PRECIPITATION	A	A	A	A	A	A							
1210	KURULE GHAT	PRECIPITATION	A	A	A	A	A	A							
1211	KHOTANG BAZAR	PRECIPITATION	A	A	A	A	A	A							
1212	PHATEPUR	CLIMATOLOGY	W	A	A	A	A	A							
1213	UDAYAPUR GADHI	CLIMATOLOGY	A	A	A	A	A	A							
1215	LAHAN	CLIMATOLOGY	A	A	A	A	A	A							
1216	SIRAHA	PRECIPITATION	A	A	A	A	A	A							
1217	KHUMJUNG	PRECIPITATION	A	A	A	A	A	A							
1219	SALLERI	PRECIPITATION	A	A	A	A	A	A							
1220	CHIALSA	AGROMETEOLOGY	A	A	A	A	A	A							
1222	DIKTEL	PRECIPITATION	A	A	A	A	A	A							
1223	RAJBIRAJ	CLIMATOLOGY	A	A	A	A	A	A							
1226	BARMAJHIYA	PRECIPITATION	A	A	A	A	A	A							
1301	NUM	PRECIPITATION	A	A	A	A	A	A							
1303	CHAINPUR (EAST)	CLIMATOLOGY	A	A	A	A	A	A							
1304	PAKHRIBAS	AGROMETEOLOGY	A	A	A	A	A	A							
1305	LEGUWA GHAT	PRECIPITATION	A	A	A	A	A	A							
1306	MUNGA	PRECIPITATION	A	A	A	A	A	A							
1307	DHANKUTA	SYNOPTIC	A	A	A	A	A	A							
1308	MUL GHAT	PRECIPITATION	A	A	A	A	A	A							
1309	TRIBENI	PRECIPITATION	A	A	A	P	P	A							
1311	DHARAN BAZAR	PRECIPITATION	A												
1312	HARAINCHA	PRECIPITATION	A	A	A	A	A	A							
1314	TERMATHUM	CLIMATOLOGY	W	W	W	W	W	W							
1316	CHATARA	PRECIPITATION	A	A	A	A	A	A							
1317	CHEPUWA	PRECIPITATION	A	A	A	A	A	A							
1319	BIRATNAGAR AIRPOART	AERONATICAL	A	A	A	A	A	A							
1320	TARAHARA	AGROMETEOLOGY	A	A	A	A	A	A							
1321	TUMLINGTAR	PRECIPITATION	A	A	A	A	A	A							
1322	MACHUWAGHAT	PRECIPITATION	A	A	A	A	A	A							
1323	DHARAN BRITISH CAMP	CLIMATOLOGY													
1324	BHOJPUR	AGROMETEOLOGY	A	A	A	A	A	A							
1325	DINGLA	PRECIPITATION	A	A	A	A	A	A							
1403	LUNGTHUNG	PRECIPITATION	A	A	A	A	A	A							
1404	TAPLETHOK	PRECIPITATION	A	A	A	A	A	A							
1405	TAPLEJUNG	SYNOPTIC	A	A	A	A	A	A							
1406	MEMENG JAGAT	PRECIPITATION	A	A	A	A	A	A							
1407	ILAM TEA ESTATE	AGROMETEOLOGY	A	A	A	A	A	A							
1408	DAMAK	PRECIPITATION	A	A	A	A	A	A							
1409	ANARMANI BIRTA	PRECIPITATION	A	A	A	A	A	A							
1410	HIMALI GAUN	PRECIPITATION	A	A	A	A	A	A							
1411	SOKTIM TEA ESTATE	CLIMATOLOGY	W	W	W	W	W	W							
1412	CHANDRA GADHI	PRECIPITATION	A	A	A	A	A								
1415	SANISCHARE	PRECIPITATION	A	A	A	A	A	A							
1416	KANYAM TEA ESTATE	CLIMATOLOGY	A	A	A	A	A	A							
1419	PHIDIM (PANCHTHER)	CLIMATOLOGY	A	A	A	A	A	A							
1420	DOVAN	PRECIPITATION	A	A	A	A	A	A							
1421	GAIDA (KANKAI)	CLIMATOLOGY	A	A	A	A	A	A							

NOTE

1 THE INDEX NUMBER SHOWS REGIOL OFFICE THAT STATION BELONGS TO AS FOLLOWS:

FROM 0100 TO 0299	FAR WESTERN REGIONAL OFFICE
FROM 0300 TO 0599	MID WESTERN REGIONAL OFFICE
FROM 0600 TO 0899	WESTERN REGIONAL OFFICE
FROM 0900 TO 1199	CENTRAL REGIONAL OFFICE
FROM 1200 TO 1499	EASTERN REGIONAL OFFICE

2 THE SURVEY DATE IS SHOWN AS FOLLOWS.

FAR WESTERN REGIONAL OFFICE	There was no information.
MID WESTERN REGIONAL OFFICE	JUL. 12 AND 13
WESTERN REGIONAL OFFICE	There was no information.
CENTRAL REGIONAL OFFICE	JUL. 29
EASTERN REGIONAL OFFICE	SEP. 1

3 LEGEND

A : ALL DATA HAS BEEN COLLECTED
P : PART OF DATA HAS BEEN COLLECTED
: DATA HAS NOT BEEN COLLECTED

4 DATE

A / F MEANS THE DATE AS FOLLOWS.

A : MONTH
B : DAY

5 SOURCE

REGISTER AT EACH REGIONAL OFFICE

Table 4.11 HYDROLOGICAL DATA COLLECTION AT REGIONAL OFFICE (1 / 2)

ST.NO.	REG.	NAME OF SITES	YEAR 1991												
			ARRIVING DATE AT REGIONAL OFFICE						HOW MANY DAYS DID IT TAKE TO COLLECT DATA						
			JAN	FEB	MAR	APR	MAY	JUN	JAN	FEB	MAR	APR	MAY	JUN	AVE.
5.7598															
100															
120	F	KARKALE GAON													
150	F	PANCHESHWOR													
169.8	F	GUJAR GAON													
180.5	F	AMSARA													
190.8		BOLADEVI GAON													
205	M	KHARPU	4/12	4/12	4/14	7/4	7/4		59	29	13	51	20		34
206	M	BIHI CHHARA	4/12	4/1	4/29	6/4	7/4		59	18	16				23
208	M	SURKHET	4/21	4/21	7/4				68	38	83				63
209	M	KAWADI GHAT	5/16	5/16	5/16				93	63	34				63
210	M	SURKHET	4/12	4/12	5/21	6/16			59	29	39	33			40
215	M	SURKHET	5/17	5/17	5/17				94	64	35				64
220	M	SURKHET	4/8	4/8	5/7	6/19	6/19		55	25	25	36	5		29
225	M	SURKHET	4/8	4/8	5/7	6/19	6/19		55	25	25	36	5		29
230	M	SURKHET	4/12	4/12	5/17	5/27	7/9		59	29	45	13	25		34
240	F	ASARA GHAT													
241	M	SURKHET	2/24	4/10	4/29	5/22	6/21		12	27	6	8	7		12
245	M	GITACHAUR	4/10						57						57
250	F	BENIGHAT													
251	F	CHAINPUR													
255	F	KAKARSANT													
259.2	F	GOPAGHAT GAON													
260	F	BANGA NEAR BELGAON													
262	F	KHANAYATAL													
265	M	RIMNA	7/9	7/9	7/9	7/9	7/9		147	117	88	56	25		87
267	M	SIMLI GHAT	5/21	5/19	7/4	7/7	7/9		98	66	83	54	25		65
270	M	JAMU	2/17	3/26	4/16	5/19	7/4		5	12	3	5	20		9
280	F	CHISAPANI													
284	M	SHYALPIN	3/26	_	4/26	5/16	6/21		42		13	7	7		17
285	F	KALAKUNTA													
286	M	DARADHUNGA	4/8	3/12	4/26	5/26	7/4		55	12	13	21	20		24
287	M	SATTAR FARM	4/11						58						58
288	M	KOTHIYA GHAT	5/1	5/1	5/1				78	48	19				48
289	M	GANGATE GAON													
289.5	M	SIRCHAUR GAON	3/26	3/26	4/21	5/26	7/4		42	12	8	12	20		19
327	M	KHUNGREE GAON	3/8	4/16	4/26	5/26	7/5		24	33	13	12	21		21
330	M	NAYAGAON	3/8	4/12	4/26	5/26	7/4		24	29	13	12	20		20
333	M	DEVISTAN	4/8	_	4/23	6/10			55		10	27			31
339.5	M	TIGRA GAON	_	4/7	5/1	6/4	7/4		24	19	21	20	23		21
340	M	KALIMATI - GHAT													
350	M	BAGASOTI GAON	4/1	4/1	4/23		7/4		48	18	10		20		19
350.5	M	TINKHANNE GAON	4/8	4/8	4/18	5/21	12/6		55	25	5	7	175		53
360	M	JALKUNDI	4/8	4/5	4/21				55	22	8				28
380	M	SINDHANIA													
385	M	SIWANAGAR													
387.4	W	KALIMATI													
387.5	W	CHARCHARE													
387.8	W	DUMARI BARI													
390	W	BUTWAL													
391	W	ORLAWA													
403	W	JOMSOM													
404.6	W	KALIPUL BENI													
404.7	W	MANGLA GHAT													
406.5	W	NAYAPUL NEAR													
409.5	W	SETI BENI													
410	W	SETI BENI													
414	W	ARJUN CHAUPARI													
415	W	DUMRICHAUR													
416	W	ANGSING													
416.2	W	WAMITAKSAR													
417	W	RUDRABENI GULMI													
419.1	W	ANSIGH - ANDHI GHAT													
420	C	KOTAGAON SHRINGE													
428	W	LAHACHOK													
429.9	W	BAGAR													
430	W	PHOOLBARI													
438	W	SHISA GHAT													
439.3	W	KHUDI BAZAR													
439.4	W	AMOTE BAGAR - SERA													
439.7	W	BIMAL NAGAR													
440	W	GARAM BESI													
441	W	NAYASANGU GORKHA													
445	W	ARUGHAT													
445.3	W	ANKHU BRIDGE													
446.2	C	SHYAPRUBESI													
446.3	C	DHUNCHE	A	A	A	A	A								
446.8	C	BETRAWATI													
447	C	BETRAWATI													
447.4	C	RAUTAR NUWAKOT	A	A											
447.9	C	PATTAWARI NUWAKOT													
448	C	TADIPUL BELKOT	A	A	A	A									
449.95	C	BHORLETAR	A	A											
450	C	NARAYAN GHAT													
460	C	RAJAIYA													
465	C	MANAHARI	A	A											
470	C	LOTHAR	A												
505	C	SUNDARIJAL	A	A	A	A									

Table 4.11 HYDROLOGICAL DATA COLLECTION AT REGIONAL OFFICE (2 / 2)

ST.NO.	REG	NAME OF SITES	YEAR 1991												
			ARRIVING DATE AT REGIONAL OFFICE						HOW MANY DAYS DID IT TAKE TO COLLECT DATA						
			JAN	FEB	MAR	APR	MAY	JUN	JAN	FEB	MAR	APR	MAY	JUN	AVE.
507	C	SUNDARIJAL						A							
510	C	SHYAMDADO	A	A	A										
511	C	GAGALGAU	A	A	A										
530	C	GAURI GHAT	A	A	A										
536.2	C	BUDHANILKANTHA	A	A	A										
550.1	C	SAMPKHEL	A	A	A										
589	C	PANDHERA DOBHAN													
598	E	CHISAPANI	A	A	A	A	A	A							
599	E	INARWA	A	A	A	A	A	A							
600.05	E	SEKSILA HATIYA	A	A	A	A	A	A							
600.1	E	UWA GAON	A	A	A	A	A	A							
601.8	E	KURLE BESI	A	A	A	A	A	A							
601.9	E	KURLE BESI	A	A	A	A	A	A							
602	E	TUMLINGTAR	A	A	A	A	A	A							
602.5	E	PIPLETAR	A	A	A	A	A	A							
604	E	LEGUWA GHAT	A	A	A	A	A	A							
604.5	E	TURKEGHAT	A	A	A	A	A	A							
606	E	SIMLE	A	A	A	A	A	A							
610	C	BARABISE	A	A											
612	C	BARABISE	A	A											
620	C	JALBIRE													
625	C	DOLALGHAT	A	A	A	A									
627.5	C	HELAMBU	A												
629.1	C	DOLAL GHAT	A	A	A										
630	C	PACHUWAR GHAT	A	A	A										
640	C	PANAUTI		A	A										
647	C	BUSTI													
650	C	RASNALU VILLAGE	A												
652	C	KHURKOT	A												
660	C	SANGUTAR	A												
665	E	AHRKAPUR (TOKSELGHA	A	A	A	A	A	A							
668.4	E	BENI	A	A	A	A	A	A							
668.5	E	SALME	A	A	A	A	A	A							
670	E	RABUWA BAZAR	A	A	A	A	A	A							
680	E	KAMPUGHAT	A	A	A	A	A	A							
681	E	HAMPUACHUWAR	A	A	A	A	A	A							
684	E	MAJHITAR	A	A	A	A	A	A							
688.7	E	DHANKUTA	A	A	A	A	A	A							
689	E	BIRETAR NEAR DHANKU	A	A	A	A	A	A							
690	E	MULGHAT	A	A	A	A	A	A							
691	E	TRIBENI	A	A	A	A	A	A							
695	E	CHATARA-KOTHU	A	A	A	A	A	A							
728	E	RAJDWAIL	A	A	A	A	A	A							
730	E	SAJBOTE (ILAM)	A	A	A	A	A	A							
738	E	ANGDANG	A	A	A	A	A	A							
795	E	MAINACHULI	A	A	A	A	A	A							
799	E	KUMARKHOD - JHAPA	A	A	A	A	A	A							

NOTE

REG
- F : FAR WESTERN
- M : MID WESTERN
- W : WESTERN
- C : CENTRAL
- E : EASTERN

DATE

A/B : A = MONTH
B = DATE

LEGEND

- A : ALL DATA HAS BEEN COLLECTED
- P : PART OF DATA HAS BEEN COLLECTED
- O : STATION WAS OPEND

THESE CONDITION WAS INVESTIGATED ON AUGUST 1991

SOURCE : REGISTER AT CENTRAL OFFICE

Table 4.12 HYDROLOGICAL DATA PROCESSING AT REGIONAL OFFICE IN 1991 (AUG. 1991)

ST.NO.	REG.	NAME OF RIVER	NAME OF SITES	STAFF GAGE READING										DISCHARGE MEASUREMENT										MAKE RATING TABLE										DISCHARGE CALCULATION									
				85	86	87	88	89	90	91				85	86	87	88	89	90	91				85	86	87	88	89	90	91				85	86	87	88	89	90	91			
5.7598																																											
100																																										
120	F	CHAMELIA	KARKALE GAON	A	A	A	A	A	A					A	A	A	A																										
150	F	MAHAKALI	PANCHESHWOR						A									A	A																								
169.8	F	SURNAGAD	GUJAR GAON		A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A														
190.5	F	KANDRA KHOLA	AMSARA	A	A	A	A	A	A						A	A	A	A	A																								
190.8		KHUTIYA KHOLA	BOLADEVI GAON																																									
205	M	KHARPU KHOLA	KHARPU	A	A	A			P																																		
206	M	HUMLA KARNALI	BIHI CHHARA	A	A	A			P									A	A																								
208	M	MUGU KARNALI	SURKHET	A	A	A			P								A	A	A																								
209	M	KAWADI KHOLA	KAWADI GHAT																																									
210	M	RARA DAHA	SURKHET	A	A	A									A	A	A	A	A																								
215	M	HUMLA KARNALI	SURKHET	A	A	A								A	A	A																												
220	M	TILA NALA	SURKHET	A	A	A								A	A	A	A	A	A																								
225	M	SINJA KHOLA	SURKHET	A	A	A								A	A	A	A	A	A																								
230	M	TILA NADI	SURKHET	A	A	A								A	A	A	A	A																								
240	F	KARNALI	ASARA GHAT	A	A	A	A	A	A					A	A	A	A	A	A					A																		
241	M	LOHARE KHOLA	SURKHET											A	A	A	A	A	A																								
245	M	CHHAMGHAT KHOLA	GITACHAUR		A	A									A				A																								
250	F	KARNALI	BENIGHAT	A	A	A	A	A	A					A	A	A	A	A	A					A	A	A																
251	F	SETI	CHAINPUR				A	A	A										A																								
255	F	BHDHI GANGA	KAKARSANT	A	A	A	A	A	A					A	A	A	A	A	A																								
259.2	F	SETI	GOPAGHAT GAON	A	A	A	A	A	A						A	A	A	A	A																								
260	F	SETI	BANGA NEAR BELGAON	A	A	A	A	A	A					A	A	A	A	A	A																								
262	F	TULI GAD	KHANAYATAL	A	A	A	A	A	A					A	A	A	A	A	A					A	A																	
265	M	THULO BHERI	RIMNA	A	A	A		P	P					A	A	A	A	A	A																								
267	M	SANO BHERI	SIMLI GHAT	A	A	A		P	P					A	A	A	A	A	A																								
270	M	BHERI	JAMU	A	A	A		P	P										A																								
280	F	KARNALI	CHISAPANI	A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A															
284	M	SARDA KHOLA	SHYALPIN	A	A	A		P	P					A	A	A	A	A	A																								
285	F	MOHANA	KALAKUNTA	A	A	A	A	A	A																																		
286	M	SARADA KHOLA	DARADHUNGA	A	A	A								A	A	A	A	A	A								A															
287	M	KAURIALA KARNALI	SATTAR FARM																																									
288	M	GERUWA KARNALI	KOTHIYA GHAT	A	A	A																																					
289	M	BABAI	GANGATE GAON	A	A																																						
289.5	M	GOHARKHOLA	SIRCHAUR GAON					P	P					A	A	A	A	A	A																								
290		BABAI	BARGADHA																																								
327	M	LUNGRI LHOLA	KHUNGREE GAON	A	A	A		P	P					A	A	A	A	A	A					P																		
330	M	MARI LHOLA	NAYAGAON	A	A	A		P	P					A	A	A	A	P	A																								
333	M	ARUN KHOLA	DEVISTAN	A	A	A		P	P					A	A	A	A	A	A					A																		
339.5	M	JHIMRUK KHOLA	TIGRA GAON	A	A	A	A	P	P					A	A	A	P	A	A																								
340	M	JHIMRUK KHOLA	KALIMATI - GHAT																																								
350	M	RAPTI	BAGASOTI GAON	A	A		A	P	P					A	A	A	A	A	A					P																		
350.5	M	RANGSING KHOLA	TINKHANNE GAON	A	A	A		P	P					A	A	A	A	A	A																								
360	M	RAPRI	JALKUNDI	A	A	A	A	P	P					A	A	A	A	A	A																								
380	M	RAPTI	SINDHANIA																																								
385	M	SURAHI KHOLA	SIWANAGAR														A	A																								
387.4	W	DUMRE KHOLA	KALIMATI	A	A	A	A	A	A					A	A	A	A	A	A																								
387.5	W	MADI TINAU	CHARCHARE	A	A	A	A	A	A					A	A	A	A	A	A																								
387.8	W	JHUMSA KHOLA	DUMAHI BARI	A	A	A	A	A	A					A	A	A	A	A	A																								
390	W	TINAU KHOLA	BUTWAL	A	A	A	A	A	A					A	A	A	A	A	A																								
391	W	DANAB KHOLA	ORLAWA																																								
403	W	KALI GANDAKI	JOMSOM	A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A				
404.6	W	KALI GANDAKI	KALIPUL BENI	A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A				
404.7	W	MYAGDI KHOLA	MANGLA GHAT	A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A				
406.5	W	MODI KHOLA	NAYAPUL NEAR				A	A	A					A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A				
409.5	W	SETI KHOLA	SETI BENI	A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A				
410	W	KALI GANDAKI	SETI BENI	A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A				
414	W	DARAUN KHOLA	ARJUN CHAUPARI																																								
415	W	ANDHI KHOLA	DUMRICHAUR	A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A					A	A	A	A	A	A				
416	W	KALI GANDAKI	ANGSING					O										O									O											O				
416.2	W	DARAM KHOLA	WAMITAKSAR	A	A	A	A	A	A					A	A	A	A	A	A																								

Table 4.12 HYDROLOGICAL DATA PROCESSING AT REGIONAL OFFICE IN 1991 (AUG. 1991)

ST.NO.	REG.	NAME OF RIVER	NAME OF SITES	STAFF GAGE READING									DISCHARGE MEASUREMENT									MAKE RATING TABLE									DISCHARGE CALCULATION								
				85	86	87	88	89	90	91			85	86	87	88	89	90	91			85	86	87	88	89	90	91			85	86	87	88	90	90	91		
417	W	BADIGAD KHOLA	RUDRABENI GULMI	A	A	A	A	A	A				A	A	A	A	A	A				A	A	A	A	A					A	A	A	A	A				
419.1	W	KALI GANDAKI	ANSIGH - ANDHI GHAT					O									O	A							O									O				
420	C	KALI GANDAKI	KOTAGAON SHRINGE	A	A	A	A	A	A				A	A	A	A	A	A				A	A																
428	W	MARDI KHOLA	LAHACHOK	A	A	A	A	A	A				A	A	A	A	A																						
429.9	W	SETI IRRG. CANAL	BAGAR			O									O									O									O					
430	W	SETI	PHOOLBARI	C	C	C	A	A	A				A	A	A	A	A	A																					
436	W	MADI	SHISA GHAT	A	A	A	A	A	A				A	A	A	A	A	A																					
439.3	W	KHUDI KHOLA	KHUDI BAZAR	A	A	A	A	A	A				A	A	A	A	A	A																					
439.4	W	DORDI KHOLA	AMOTE BAGAR - SERA		A	A	A	A	A				A	A	A	A	A	A																					
439.7	W	MARSYANGDI	BIMAL NAGAR			O	A	A	A						O									O	A	A							O	A	A				
440	W	CHEPE KHOLA	GARAM BESI	A	A	A	A	A	A				A	A	A	A	A	A																					
441	W	DARAUNDI KHOLA	NAYASANGU GORKHA	A	A	A	A	A	A						A	A	A	A																					
445	W	BURHI GANDAKI	ARUGHAT			A	A	A	A				A	A	A	A	A	A																					
445.3	W	ANKHU KHOLA	ANKHU BRIDGE		A	A	A	A	A																														
446.2	C	LANGTANG KHOLA	SHYAPRUBESI		A	A	A	A	A																														
446.3	C	TRISULI KHOLA	DHUNCHE	A	A		A	A	A				A	A	A	A																							
446.8	C	PHALANKHU KHOLA	BETRAWATI	A	A	A	A	A	A				A	A	A	A	A	A				A	A																
447	C	TRISULI	BETRAWATI	A	A	A	A	A	A				A	A	A	A	A	A				A	A	A															
447.4	C	TADI KHOLA	RAUTAR NUWAKOT		A																																		
447.9	C	LIKHU KHOLA	PATTAWARI NUWAKOT	A	A	A																																	
448	C	TADI KHOLA	TADIPUL BELKOT	A	A	A	A	A					A	A	A	A	A	A				A	A																
449.9	C	TRISULI	MUGLING																																				
449.95	C	TRISULI KHOLA	BHORLETAR	A																																			
450	C	NARAYANI	NARAYAN GHAT	A	A	A	A	A	A				A	A	A	A						A	A	A	A														
460	C	RAPTI RIVER	RAJAIYA	A	A	A	A	A	A				A	A	A	A	A	A				A	A	A	A														
465	C	MANAHARI KHOLA	MANAHARI	A	A	A	A	A	A				A	A	A	A	A	A				A																	
470	C	LOTHAR KHOLA	LOTHAR	A	A	A	A	A	A				A	A	A	A	A	A				A	A	A	A														
505	C	BAGMATI	SUNDARIJAL	A	A	A	A	A	A				A	A	A	A	A	A				A	A																
507	C	NAGMATI	SUNDARIJAL	A	A	A							A	A	A	A	A	A																					
510	C	SIALMATI	SHYAMDADO	A	A	A							A	A	A	A	A	A																					
511	C	DHAKAL KHOLA	GAGALGAU	A	A	A																																	
520	C	BAGMATI	GOKARNA	A	A	A		A																															
530	C	BAGMATI	GAURI GHAT	A	A	A							A	A	A	A	A	A																					
536.2	C	BISHNUMATI KHOLA	BUDHANILKANTHA		A	A	A							A	A	A						A	A	A	A	A	A				A	A							
548	C	NAKHU KHOLA	NAKHU JAIL																																				
550.1	C	BAGMATI	SAMPKHEL																																				
589	C	BAGMATI	PANDHERA DOBHAN	A	A	A	A	A	A				A	A	A	A	A	A				A																	
592	C	BAGMATI	BRAMHAPURI																																				
598	E	KAMALA	CHISAPANI																																				
599	E	KAMALA	INARWA																																				
600.05	E	BARUN KHOLA	SEKSILA HATIYA																																				
600.1	E	ARUN	UWA GAON		A	A								A	A								A	A														
601.8	E	PANGTHA KHOLA	KURLE BESI	A	A	A								A	A	A																						
601.9	E	PANGMA KHOLA	KURLE BESI	A	A	A								A	A	A																						
602	E	SABHAYA KHOLA	TUMLINGTAR	A	A	A	A	A	A				A	A	A	A	A					A	A	A	A	A	A				A		A						
602.5	E	HINWA KHOLA	PIPLETAR	A	A	A	A	A	A				A	A	A	A	A	A				A	A	A	A	A	A												
604	E	ARUN	LEGUWA GHAT																																				
604.5	E	ARUN	TURKEGHAT	A	A	A	A	A					A	A	A	A	A																						
606	E	ARUN	SIMLE		A	A	A	A	A					A	A	A	A	A																					
610	C	BHOTE KOSI	BARABISE	A	A	A	A	A	A														A	A	A	A	A												
612	C	SUN KOSI	BARABISE	A	A	A																																	
620	C	BALEPHI KHOLA	JALBIRE		A	A	A	A	A														A	A															
625	C	SUN KOSI	DOLALGHAT	A	A	A	A	A	A																														
627.5	C	MELAMCHI KHOLA	HELAMBU					O																															
629	C	INDRAWATI	DOLAL GHAT																																				
629.1	C	INDRAWATI	DOLAL GHAT	A	A	A	A	A	A				A	A	A	A	A	A																					
630	C	SUN KOSI	PACHUWAR GHAT	A	A	A	A	A	A				A	A	A	A						A	A	A	A	A												
640	C	ROSI KHOLA	PANAUTI		A	A	A	A	A				A	A	A	A		A				A	A	A	A														
647	C	TAMAKOSI	BUSTI	A	A	A	A	A	A				A	A	A		A	A				A	A	A															
650	C	KHIMTI KHOLA	RASNALU VILLAGE	A	A	A	A						A	A	A	A	A	A				A																	
652	C	SUNKOSI	KHURKOT	A	A	A	A	A	A				A	A	A	A	A	A				A	A	A	A	A	A												
660	C	LIKHU KHOLA	SANGUTAR	A	A	A	A	A	A				A	A	A	A	A	A				A	A	A	A	A													
665	E	SUN KOSI	AHRIKAPUR (TOKSELGHAT)		A	A	A	A						A	A	A	A																						

Table 4.12 HYDROLOGICAL DATA PROCESSING AT REGIONAL OFFICE IN 1991 (AUG. 1991)

ST.NO.	REG.	NAME OF RIVER	NAME OF SITES	STAFF GAGE READING							DISCHARGE MEASUREMENT							MAKE RATING TABLE							DISCHARGE CALCULATION						
				85	86	87	88	89	90	91	85	86	87	88	89	90	91	85	86	87	88	89	90	91	85	86	87	88	90	90	91
668.4	E	TAKTOR KHOLA	BENI				A	A	A				A	A	A																
668.5	E	SOLUA KHOLA	SALME		A	A	A	A				A	A	A	A				A	A	A	A	A								
670	E	DUDH KOSI	RABUWA BAZAR	A	A	A	A	A			A	A	A	A	A			A	A	A	A	A			A	A	A	A	A		
680	E	SUN KOSHI	KAMPUGHAT	A	A	A	A	A										A							A						
681	E	SUN KOSHI	HAMPUACHUWAR				A	A	A					A	A	A															
684	E	TAMUR	MAJHITAR		A	A	A	A	A			A	A	A	A	A			A	A	A	A	A	A			A	A	A	A	
688.7	E	NIBUWA KHOLA	DHANKUTA																												
689	E	TANKHUWA KHOLA	BIRETAR NEAR DHANKUT	A																											
690	E	TAMUR	MULGHAT	A	A	A	A	A			A	A	A	A	A			A	A	A	A	A			A	A	A	A	A		
691	E	TAMUR	TRIBENI		A	A	A	A	A			A	A	A	A	A															
695	E	SAPTA KOSHI	CHATARA-KOTHU	A	A	A	A	A			A	A	A	A		A		A	A	A	A				A	A	A	A	A		
728	E	MAI KHOLA	RAJDWAIL	A	A	A	A	A			A	A	A	A	A			A	A												
730	E	PUWA KHOLA	SAJBOTE (ILAM)		A	A	A	A	A																						
738	E	DEO MAI KHOLA	ANGDANG		A	A						A	A	A	A																
795	E	KANKAI MAI	MAINACHULI	A	A	A	A	A	A		A	A	A	A	A	A		A	A	A	A	A	A		A	A	A	A	A	A	
799	E	KANKAI	KUMARKHOD - JHAPA	A	A	A	A	A				A	A	A	A																

NOTE

REG. : REGION
F : FARWESTERN
M : MID WESTERN
W : WESTERN
C : CENTRAL
E : EASTERN

A : ALL DATA IS PROCESSED
P : PART OF DATA IS PRECESSED
O : STATION WAS OPEND
C : STATION WAS CLOSED

Source : MONITORING FORM COLLECTED BY THE CENTRAL OFFICE

Table 4.13 METEOROLOGICAL DATA COLLECTION BY ACQUISITION UNIT IN 1991

INDEX	STATION'S NAME	TYPE OF STATION	1988	1989	1990	1991
			J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
101	KAKERPAKHA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
102	BAITADI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
103	PATAN (WEST)	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
104	DANGELDHURA	SYNOPTIC	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
105	MAHENDRA NAGAR	AGROMETEOLOGY		A A A A A	A A A A A A A A A A A A	
106	BELAURI SANTIPUR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
107	DARCHULA	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
108	SATBANJH	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
201	PIPALKOT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
202	CHAINPUR (WEST)	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
203	SILGADHI DOTI	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
204	BAJURA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A	A A	
205	KATAI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
206	ASARA GHAT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A	
207	TIKAPUR	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
208	SANDEPANI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
209	DHANGADHI	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A	
210	BANGGA CAMP	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
211	KHAPTAD	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A	A A A A A A	
212	SITAPUR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
214	KOLA GAUN	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A		
215	GODAVARI (WEST)	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A		
216	TEGHARI	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A		
217	MANGALSEN	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
218	DIPAYAL (DOTI)	SYNOPTIC	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
219	DHANGADHI	SYNOPTIC		A A A A A A	A A A A A A A A A A A A	
301	MUGU	PRECIPITATION	A A A A A A A A	A A A A A A A A	A A A A A A A A A A	A A A A
302	THIBRU	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
303	JUMLA	SYNOPTIC	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A
304	GUTHI CHAUR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A	A A A
305	SHERI GHAT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
306	GAM SHREE NAGAR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
307	RARA	CLIMATOLOGY		A A A A A A A A A A A A	A A A A A A A A	
308	NAGMA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
309	BIJAYAPUR (RASKOT)	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A	A A A A A A A A A A A A	A
310	DIPAL GAUN	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A
311	SIMIKOT	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A	A A A A A A A A A A	
312	DUNAI	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A	A A A A	
313	DARMA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A	A A A A
401	PUSMA CAMP	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A
402	DAILEKH	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
403	JAMU (TIKUWA KUNA)	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A
404	JAJARKOT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
405	CHISAPANI (KARNALI)	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
406	SURKHET (BIRENDRA NAGAR	SYNOPTIC	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
407	KUSUM	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A	A A A
408	GULARIYA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A
409	KHAJURA (NEPALGANJ)	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A	
410	BALE BUDHA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A
411	RAJAPUR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
412	NAUBASTA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A
413	SHYANO SHREE	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A	A
414	BAIJAPUR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A
415	BARGADAHA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A	

Table 4.13 METEOROLOGICAL DATA COLLECTION BY ACQUISITION UNIT IN 1991

INDEX	STATION'S NAME	TYPE OF STATION	1988	1989	1990	1991
			J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
416	NEPALGUNJ (REG.OFF.)	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A
417	RANI JARUWA NURSERY	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
418	MAINA GAUN (D.BAS)	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
419	SIKTA	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A
501	RUKUMKOT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
502	SHERA GAUN	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A
504	LIBANG GAUN	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
505	BIJUWAR TAR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A
507	NAYABASTI (DANG)	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
508	TULSIPUR	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A
509	GHORAHI (MASINA)	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A
510	LOILABAS	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A
511	SALYAN BAZAR	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A
512	LUWAMJULA BAZAR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A
513	CHAUR JHARI TAR	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A
514	MUSIKOT (RUKUMKOT)	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	A A
515	GHORAI	SYNOPTIC		A A A A A A A	A A A A A A A A A A A A	A A
601	JOMSOM	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
603	DHORPATAN	CLIMATOLOGY	A A A A A A A A A A A A			
604	THAKMARPHA	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
605	BAGLUNG	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
606	TATOPANI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
607	LETE	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
608	RANIPAUWA (M.NATH)	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A	A A A A A	
609	BENI BAZAR	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A		
610	GHAMI (MUSTANG)	PRECIPITATION	A A A A A A A A A	A A A A A A A A A A A A	A A A A A	
612	MUSTANG (LOMANGTAN	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A		
613	KARKI NETA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
614	KUSHMA	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
615	BOBANG	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A	
616	GURJA KHANI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
619	GHORAPANI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
620	TRIBENI	PRECIPITATION		A A A A A A A A A A A A	A A A A A A	
621	DARBANG	PRECIPITATION		A A A A A A A A A A A A	A A A A A A	
622	RANGKHANI	PRECIPITATION		A A A A A A A A A A A A	A A A A A A	
701	RIDI BAZAR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
702	TANSEN	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A	A A	
703	BUTWAL	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
704	BELUWA (GIRWARI)	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
705	BHAIRHAWA AIRPORT	AERONATICAL	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
706	DUMKAULI	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
707	BHAIRHAWA (AGRIC)	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A		
708	PARASI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
709	BARA GHAT	PRECIPITATION	A A A A A A A A A A A A			
710	DUMKIBAS	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A	
711	TAMASPUR	PRECIPITATION				
712	TRIBHUVAN TAR	PRECIPITATION				
713	RAMBAS	PRECIPITATION				
714	KRITIPUR CHULI	PRECIPITATION				
715	KHANCHIKOT	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A	
716	TAULIHAWA	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	

Table 4.13 METEOROLOGICAL DATA COLLECTION BY ACQUISITION UNIT IN 1991

INDEX	STATION'S NAME	TYPE OF STATION	1988	1989	1990	1991
			J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
719	KOLUWA	PRECIPITATION				
720	KOILAPANI	PRECIPITATION				
721	PATTHARKOT (WEST)	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
722	MUSIKOT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
723	BHAGWANPUR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
724	PAKLIHAWA	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A		
725	TAMGHAS	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
726	GARAKOT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A	
727	LUMBINI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
728	SIMARI	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A		
801	JAGAT (SETIBAS)	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A	
802	KHUDI BAZAR	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
803	POKHARA (HOSPITAL)	C2				
804	POKHARA AIRPORT	AERONATICAL	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
805	SYANGJA	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
806	LARKE SAMDO	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A		
807	KUNCHHA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
808	BANDIPUR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
809	GORKHA	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
810	CHAPKOT	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
811	MALEPATAN (POKHARA)	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A		
813	BHADAURE DEURALI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
814	LUMLE	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
815	KHAIRINI TAR	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
816	CHAME	CLIMATOLOGY	A A A A	A A A A A A A A	A A A A A A	
817	DAMAULI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
818	LAMACHAUR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
820	MANANG BHOT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
821	GHANDRUK	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A	A A A A	
822	KHULDI	PRECIPITATION	A A A A A A A A A A A A		A A A A A A	
823	GHAREDHUNGA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A	
824	SIKLESH	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
825	BEGNAS TAL	CLIMATOLOGY	A A A A A A A A A A A A			
826	WALLING	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A	
827	RUMJAKOT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A	A A A A A A	
902	RAMPUR	AGROMETEOLOGY	A A A A A A A A A A A A			
903	JHAWANI	PRECIPITATION				
904	CHISAPANI GADHI	PRECIPITATION				
905	DAMAN	CLIMATOLOGY	A A A A A A A A A A A A			
906	HETAUNDA N.F.I.	CLIMATOLOGY	A A A A A A A A A A A A			
907	AMLEKHGANJ	PRECIPITATION				
909	SIMARA AIRPORT	AERONATICAL	A A A A A A A A A A A A			
910	NIJGADH	PRECIPITATION				
911	PARWANIPUR	AGROMETEOLOGY	A A A A A A A A A A A A			
912	RAMOLI BAIRIYA	PRECIPITATION				

Table 4.13 METEOROLOGICAL DATA COLLECTION BY ACQUISITION UNIT IN 1991

INDEX	STATION'S NAME	TYPE OF STATION	1988	1989	1990	1991
			J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
914	BHARATPUR	PRECIPITATION				
915	KARKHU GAUN	PRECIPITATION				
916	TIGER TOP	PRECIPITATION				
917	HETAUNDA (IND.DIS)	PRECIPITATION				
918	BIRGANJ	PRECIPITATION				
919	MAKWANPUR GADHI	PRECIPITATION				
920	BELUWA	PRECIPITATION				
921	KALAIYA	PRECIPITATION				
922	GAUR	CLIMATOLOGY				
1001	TIMURE	PRECIPITATION				
1002	ARU GHAT D. BAZAR	PRECIPITATION				
1003	IRISULI	CLIMATOLOGY				
1004	NUWAKOT	CLIMATOLOGY	A A A A A A A A A A A A			
1005	DHADING	PRECIPITATION				
1006	GUMTHANG	PRECIPITATION				
1007	KAKANI	AGROMETEOLOGY	A A A A A A A A A A A A			
1008	NAWALPUR	PRECIPITATION				
1009	CHAUTARA	PRECIPITATION				
1010	LALITPUR (KOPUNDOL)	CLIMATOLOGY				
1011	KATHMANDU (USAID)	CLIMATOLOGY				
1012	SUNDARIJAL (PWR.HPUS	PRECIPITATION				
1013	SUNDARIJAL (WATER RI	PRECIPITATION				
1014	KATHMANDU (I.E.)	C1				
1015	THANKOT	PRECIPITATION				
1016	SARMATHANG	CLIMATOLOGY	A A A A A A A A A A A A			
1017	DUBACHAUR	PRECIPITATION				
1018	BAUNEPATI	PRECIPITATION				
1019	RANIPAUWA	AGROMETEOLOGY				
1020	MANDAN	PRECIPITATION				
1021	KRITIPUR (BAGBANI)	AGROMETEOLOGY				
1022	GODAVARI	CLIMATOLOGY	A A A A A A A A A A A A			
1023	DOLAL GHAT	PRECIPITATION	A A A A A A A A A A A A			
1024	DHULIKHEL	CLIMATOLOGY				
1025	DHAP	PRECIPITATION				
1026	BUDAL (BANEPA)	PRECIPITATION				
1027	BAHRABISE	PRECIPITATION				
1028	PACHUWAR GHAT	PRECIPITATION				
1029	KHUMALTAR	AGROMETEOLOGY	A A A A A A A A A A A A			
1030	KATHMANDU AIRPORT	AERONATICAL	A A A A A A A A A A A A			
1031	KYANGJIN (LANGTANG)	CLIMATOLOGY				
1032	KATHMANDU (LAZIMPAT	CLIMATOLOGY				
1034	GATLANG	CLIMATOLOGY				
1035	SANKHU	PRECIPITATION				
1036	PANCHKHAL	AGROMETEOLOGY	A A A A A A A A A A A A			
1037	CHILANJIE GAUN	CLIMATOLOGY				

Table 4.13 METEOROLOGICAL DATA COLLECTION BY ACQUISITION UNIT IN 1991

INDEX	STATION'S NAME	TYPE OF STATION	1988	1989	1990	1991
			J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
1038	DHUNIBESI	CLIMATOLOGY	A A A A A A A A A A A A			
1039	PANIPOKARI (KATHMAN	CLIMATOLOGY	A A A A A A A A A A A A			
1040	TIKA BHAIRAB	PRECIPITATION				
1041	SOKARNA	PRECIPITATION				
1042	KHUDKHU KHOLA	PRECIPITATION				
1043	NAGARKOT	CLIMATOLOGY	A A A A A A A A A A A A			
1044	BRIDHARA	PRECIPITATION				
1045	KATHMANDU (LAL DARB	PRECIPITATION				
1046	PHUTUNG	PRECIPITATION				
1047	PHARPING	PRECIPITATION				
1048	PANCHMANE	PRECIPITATION				
1049	KHOPASI (PANAUTI)	PRECIPITATION				
1050	MAHADEV KHOLA	PRECIPITATION				
1051	BUDHANILAKANTHA	PRECIPITATION				
1052	BHAKTAPUR	PRECIPITATION				
1054	THAMACHIT	PRECIPITATION				
1055	DHUNCHE	CLIMATOLOGY				
1056	TOKHA	PRECIPITATION				
1057	PANSAYAKHOLA	CLIMATOLOGY	A A A A A A A A A A A A			
1058	TARKE GHYANG	PRECIPITATION				
1059	CHANGU NARAYAN	PRECIPITATION				
1060	CHAPA GAUN	PRECIPITATION				
1061	LUBHU	PRECIPITATION				
1062	SANGACHOK	CLIMATOLOGY	A A A A A A A A A A A A			
1063	THOKARPA	PRECIPITATION				
1064	SUNDARIJAL	PRECIPITATION				
1065	SIVAPURI	PRECIPITATION				
1066	SANGA	PRECIPITATION				
1067	PHARPING	PRECIPITATION				
1068	MAHARAJGANJ	PRECIPITATION				
1069	BABARMAHAL	CLIMATOLOGY				
1070	KULEKHANI	PRECIPITATION				
1071	BUDDHANILAKANTHA	CLIMATOLOGY	A A A A A A A A A A			
1072	PAIGUTANG	CLIMATOLOGY				
1101	NAGDAHA	PRECIPITATION				
1102	CHARIKOT	PRECIPITATION				
1103	JIRI	AGROMETEOLOGY	A A A A A A A A A A A A			
1104	MELUNG	PRECIPITATION	A A A A A A A A A			
1105	UTINPUR	PRECIPITATION				
1106	RAMECHHAP	PRECIPITATION				
1107	SINDHULI GADHI	CLIMATOLOGY				
1108	BAHUN TILPUNG	PRECIPITATION				
1109	PATTHARKOT (EAST)	PRECIPITATION				
1110	TULSI	PRECIPITATION				
1111	JANAKPUR AIRPORT	CLIMATOLOGY	A A A A A A A A A A A A			

Table 4.13 METEOROLOGICAL DATA COLLECTION BY ACQUISITION UNIT IN 1991

INDEX	STATION'S NAME	TYPE OF STATION	1988	1989	1990	1991
			J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
1112	CHISAPANI BAZAR	PRECIPITATION				
1113	THDDUNG	CLIMATOLOGY				
1114	HARDINATH	AGROMETEOLOGY				
1115	NEPALTHOK	PRECIPITATION				
1116	HARIHARPUR GADHI	PRECIPITATION				
1117	HARIHARPUR GADHI VAI	PRECIPITATION				
1118	MANUSMARA	CLIMATOLOGY	A A A A A A A A A A A A			
1119	GAUSALA	PRECIPITATION				
1120	MALANGWA	PRECIPITATION				
1121	KARMAIYA	CLIMATOLOGY	A A A A A A A A A A A A			
1122	JALESORE	CLIMATOLOGY				
1201	NAMCHE BAZAR	CLIMATOLOGY				
1202	CHAURIKHARK	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1203	PAKARNAS	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1204	AISEALUKHARK	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A	
1206	OKHALDHUNGA	SYNOPTIC	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1207	NAME BHANJYANG	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1208	DWARPA	C5				
1210	KURULE GHAT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1211	KHOTANG BAZAR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1212	PHATEPUR	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A	
1213	UDAYAPUR GADHI	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A		
1215	LAHAN	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1216	SIRAHA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1217	KHUMJUNG	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A	
1218	TENGBOCHE	CLIMATOLOGY				
1219	SALLERI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1220	CHIALSA	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1221	AMATAI	PRECIPITATION				
1222	DIKTEL	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1223	RAJBIRAJ	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1224	SIRWA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A	
1225	SYANGBOCHE	SYNOPTIC				
1226	BARMAJHIYA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1301	NUM	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A	A
1303	CHAINPUR (EAST)	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1304	PAKHRIBVAS	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A	A A A A A A A A A A A A	
1305	LEGUWA GHAT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A	
1306	MUNGA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1307	DHANKUTA	SYNOPTIC	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1308	MUL GHAT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1309	TRIBENI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A	
1310	BARAHKSHETRA	C2				
1311	DHARAN BAZAR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1312	HARAINCHA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1313	BIRATNAGAR (CITY)	C5				
1314	TERMATHUM	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A	A A	A
1315	KHARE LALANTAR	PRECIPITATION				

Table 4.13 METEOROLOGICAL DATA COLLECTION BY ACQUISITION UNIT IN 1991

INDEX	STATION'S NAME	TYPE OF STATION	1988	1989	1990	1991
			J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
1316	CHATARA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1317	CHEPUWA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1318	PARIPATLE (HORTI)	CLIMATOLOGY				
1319	BIRATNAGAR AIRPOART	AERONATICAL	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1320	TARAHARA	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1321	TUMLINGTAR	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1322	MACHUWAGHAT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1323	DHARAN BRITISH CAMP	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A		
1324	BHOJPUR	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1325	DINGLA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1401	CLANGCHUNG GOLA	CLIMATOLOGY				
1402	PANGTHUNG DOMA	C5				
1403	LUNGTHUNG	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1404	TAPLETHOK	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1405	TAPLEJUNG	SYNOPTIC	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1406	MEMENG JAGAT	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1407	ILAM TEA ESTATE	AGROMETEOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1408	DAMAK	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1409	ANARMANI BIRTA	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1410	HIMALI GAUN	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1411	SOKTIM TEA ESTATE	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1412	CHANDRA GADHI	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1413	KHAMACHIN	C5				
1414	NUP	C5				
1415	SANISCHARE	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1416	KANYAM TEA ESTATE	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1417	JAUBARI	CLIMATOLOGY				
1418	ANGBUNG	C4				
1419	PHIDIM (PANCHTHER)	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	
1420	DOVAN	PRECIPITATION	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A	
1421	GAIDA (KANKAI)	CLIMATOLOGY	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A A A A A A A	

NOTE A : ALREADY COLLECT DATA
C : INDIA INSTALLED STATION

INDE : 0100 - 0299 FAR WESTERN REGION
0300 - 0599 MID WESTERN REGION
0600 - 0899 WESTERN REGION
0900 - 1199 CENTRAL REGION
1200 - 1499 EASTERN REGION

Source : MONITORING FORM COLLECTED BY THE CENTRAL OFFICE

Table 4.14 PRECIPITATION DATA STORED IN DATA BASE IN 1991

(AUG. 1991)

IND.	TYPE OF STATION	YEAR																																																	
		40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
101	PRECIPITATION																O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
102	PRECIPITATION																																	O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
103	CLIMATOLOGY																O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
104	SYNOPTIC																O	A	A	A	A	A	A	A	A	A	C				O	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
105	AGROMETEOLOGY																															O	A	A	A	A	A	A	A	A	A	P	P	A	A	P	A	P	P	P		
106	PRECIPITATION																															O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	P		
107	CLIMATOLOGY																																		O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
108	PRECIPITATION																																				O	A	A	A	A	A	A	A	A	A	A	A	A	A		
201	PRECIPITATION																O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
202	CLIMATOLOGY																O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	,	A		
203	CLIMATOLOGY																O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
204	PRECIPITATION																																				O	A	A	A	A	A	A	A	A	A	P	A	A	P		
205	PRECIPITATION																		O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A	A	P	A		
206	PRECIPITATION																							O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
207	CLIMATOLOGY																																				O	P	A	A	A	A	A	A	A	A	A	A	A	A		
208	PRECIPITATION																	O	.	.	.	.	P	A	A	A	A	A	A	P	A	A	A	A	A	A	A	P	A	A	A	P	A	A	A	A	A	A	A	A		
209	CLIMATOLOGY																O	A	A	A	A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	P	P	P	A	A	A	A	A	A	A		
210	CLIMATOLOGY																							O	P	A	A	A	A	A	A	A	A	A	A	A	P	A	P	A	A	P	P	A	A	A	A	A	A	P		
211	PRECIPITATION																																				O	P	P	P	P	P	P	P	P	A	A	P	A	P		
212	PRECIPITATION																															O	A	A	A	A	A	A	P	A	A	A	A	A	A	A	P	A	A	A		
214	PRECIPITATION																																			O	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
215	CLIMATOLOGY																																			O	A	P	P	P	P	A	A	A	A	A	A	A	A	A		
216	CLIMATOLOGY																																			O	A	A	A	P	P											
217	PRECIPITATION																																				O	A	P	A	A	A	A	A	A	A	A	A	A	A		
218	SYNOPTIC																																									O	A	A	A	A	P	A	A		
219	SYNOPTIC																																																	O		
301	PRECIPITATION																		O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	P	A	A	A	P	A	P	A	A	P	P	A	P	A	P	P		
302	PRECIPITATION																O	A	A	A	A	A	A	P	A	A	,	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
303	SYNOPTIC																O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A	A	A	A	A	A	P	A	P	A	A	A	A	A	A		
304	PRECIPITATION																																				O	A	A	A	A	A	A	A	A	A	A	A	A	A		
305	PRECIPITATION																										O	A	A	A	A	A	A	A	A	A	A	A	P	A	P	A	A	A	A	A	A	P	A	A		
306	PRECIPITATION																														O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	P	P		
307	CLIMATOLOGY																														O	A	A	A	A	A	A	A	P	A	P	P	P	A	A	A	P	A	A	P		
308	PRECIPITATION																														O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P		
309	PRECIPITATION																O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	P		
310	CLIMATOLOGY																																		O	A	A	A	A	A	A	A	A	A	P	A	A	A	A	A		
311	CLIMATOLOGY																																				O	,	P	A	A	P	P	A	A	A	A	A	A	P		
312	CLIMATOLOGY																		O	A	A	A	A	A	A	A	A	A	A	A	P	P	A	P	A	A	A	P	A	P	A	A	A	A	A	A	A	A	P	P		
313	PRECIPITATION																																							O	A	A	A	A	A	A	A	A	A	A		
401	CLIMATOLOGY																							O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A	A		
402	CLIMATOLOGY																	O	A	A	.	.	P	A	A	A	A	P	A	P	A	A	A	A	A	A	A	P	A	A	A	A	A	A	A	A	A	A	A	A		
403	PRECIPITATION																							O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P		
404	PRECIPITATION																O	A	A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
405	CLIMATOLOGY																							O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
406	SYNOPTIC																	O	A	A	A	A	A	A	A	A	A	P	A	A	A	A	A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
407	PRECIPITATION																O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A	P	A	A	A	A	A	A	A	A		
408	PRECIPITATION																	O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
409	AGROMETEOLOGY																												O	P	A	A	A	P	A	A	P	A	A	A	P	P	P	A	A	A	A	A	A	A		
410	PRECIPITATION																									O	A	P	A	P	A	A	A	A	A	A	P	P	P	A	A	A	A	A	A	A	A	A	A	A		
411	PRECIPITATION																															O	.	.	.	.	.	P	A	A	A	A	A	A	A	A	A	A	A	A		
412	PRECIPITATION																															O	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
413	PRECIPITATION																															O	A	A	A	A	A	P	P	A	A	A	A	P	A	A	A	A	A	A		
414	PRECIPITATION																															O	A	A	A	A	,	A	A	A	A	A	A	A	A	A	A	A	A	A		
415	PRECIPITATION																											O	A	A	A	A	P	A	A	A	A	A	P	A	A	A	A	A	A	A	A	A	A	A		
416	CLIMATOLOGY																																	O	A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A		
417	CLIMATOLOGY																																			O	A	P	P	A	A	P	P			P	A	A	A	A		
418	PRECIPITATION																																			O	A	P	P	A	A	A	A	A	A	A	A	A	A	A		
419	AGROMETEOLOGY																																						O	A	A	A	A	A	A	P	A	A	A	A		
501	PRECIPITATION																	O	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A	.	.	.	.	.	P	P	A	A	A	,	,	P	A	A	A		
502	PRECIPITATION																	O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A		
504	PRECIPITATION																	O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A			A	A	A	A	A	A	A	A	A	A	A	A		
505	PRECIPITATION																	O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A		
507	PRECIPITATION																														O	A	A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P		
508	CLIMATOLOGY																															A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
509	PRECIPITATION																														O	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		

Table 4.14 PRECIPITATION DATA STORED IN DATA BASE IN 1991 (AUG. 1991)

IND.	TYPE OF STATION	YEAR 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
510	PRECIPITATION	OAAAAAAAPAAAPAPAAAAA
511	CLIMATOLOGY	OA..PAAAPPAAAPAAAAAAAAPAAAAAAAAAAPA
512	PRECIPITATION	OAAAAAAAAAAAAAAAAAAA
513	CLIMATOLOGY	OAAAAPAAAAAAAAA
514	CLIMATOLOGY	OAAAAAAAAAAAAAAPP
515	SYNOPTIC	O
601	CLIMATOLOGY	OAAAAAAAAAAAAAACOAAAAAPPAAPAAAAPAA
603	CLIMATOLOGY	OPPP...C
604	AGROMETEOLOGY	OAAAAAAAAPAAAAAAAAAAAAA
605	CLIMATOLOGY	OAAAAAAAAAAAAAAAAAAA
606	PRECIPITATION	OAAAAPPAAAA.AAAAAAPAA
607	PRECIPITATION	OAAAAAAAAAAAAAAAAPAAA
608	PRECIPITATION	OPAAAAAAAAAPPPPAAAAAA
609	CLIMATOLOGY	OAAAAAAAAAAAAAACOAAAPAAAAAAAAAPPAA
610	PRECIPITATION	OPPPAAAAAAAAAAA
612	CLIMATOLOGY	OAAAAAPAAPAAAAAAA
613	PRECIPITATION	OAAAAAAAAAAAA
614	CLIMATOLOGY	OAAAAAAAAAAPAAAAAAAAPA
615	PRECIPITATION	OAAAAAPAAPAAA
616	PRECIPITATION	OAAAPAAAAAAA
619	PRECIPITATION	OAAAAAAPAAAAAAA
620	PRECIPITATION	O
621	PRECIPITATION	O
622	PRECIPITATION	O
701	PRECIPITATION	OAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
702	CLIMATOLOGY	OAAAAAAAAAAAAAAAAP.PPPPAAAAAAAAAAAP
703	CLIMATOLOGY	OAAAAAAAAAAAAAAAAAAAAAAAAAAAPAAAAAAA
704	PRECIPITATION	OAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
705	AERONATICAL	O.PPAAAAAAAAAAAAAAAAAAAAA
706	AGROMETEOLOGY	O.....A..PAAAPAAAAAAAAAAA
707	AGROMETEOLOGY	OPPPPAPAAAAAAAAPAAAAAA
708	PRECIPITATION	OAP..PAAAAAAAAAAAA
709	PRECIPITATION	OPC
710	PRECIPITATION	OPAPAAPAAAAAAAAAAPPA
711	PRECIPITATION	OPPC
712	PRECIPITATION	O..C
713	PRECIPITATION	OAAPC
714	PRECIPITATION	OAAPC
715	CLIMATOLOGY	OAAAAAAAAAAAAAAAAAAAA
716	CLIMATOLOGY	OAAPPPPPAAAAAAPAAAAA
719	PRECIPITATION	OPC
720	PRECIPITATION	OPC
721	PRECIPITATION	OPAPPAAAAAAAAAAAA
722	PRECIPITATION	OAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
723	PRECIPITATION	OAAAAPAAAAAAAAP
724	CLIMATOLOGY	O...AAAAC
725	CLIMATOLOGY	OPAAAAAAAAA
726	PRECIPITATION	OAAAAAAAAAA
727	PRECIPITATION	OAAAAAAAAA
728	CLIMATOLOGY	OAAAAAAAAA
801	PRECIPITATION	OAAAAAAAAAAAAAACCAAAAAAAAAAAAAAPAAPA
802	CLIMATOLOGY	OAAAAAAAPAAAAAAAAAAAAAAAAAAAAAAAAA
803	C2	OAAAAAAAAAAAAAAAAAAAA CLSE
804	AERONATICAL	O..PPAAAAAAAAAAAAAAAAAAAA
805	CLIMATOLOGY	OAAAAPAAAAAAAAAAAAA
806	PRECIPITATION	OAAAAAPP.APA
807	PRECIPITATION	OAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
808	PRECIPITATION	OAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
809	AGROMETEOLOGY	OAAAP..PAAAAAAAAAPAAAAAAAAAAAAAAAA
810	CLIMATOLOGY	OAAAAAAAAAAAAAAAAAAAAPAAAAAAAAAAAAA
811	AGROMETEOLOGY	OPAPAAAPAPPAAAAAAPPAAAAA
813	PRECIPITATION	O.....AAAAA
814	AGROMETEOLOGY	OAAAAAAAAAAAAAAAAAAA
815	AGROMETEOLOGY	O.PAAAPPAAAAAAAAAAPAA
816	CLIMATOLOGY	OAAAAAAAAAPPPPPP

Table 4.14 PRECIPITATION DATA STORED IN DATA BASE IN 1991

(AUG. 1991)

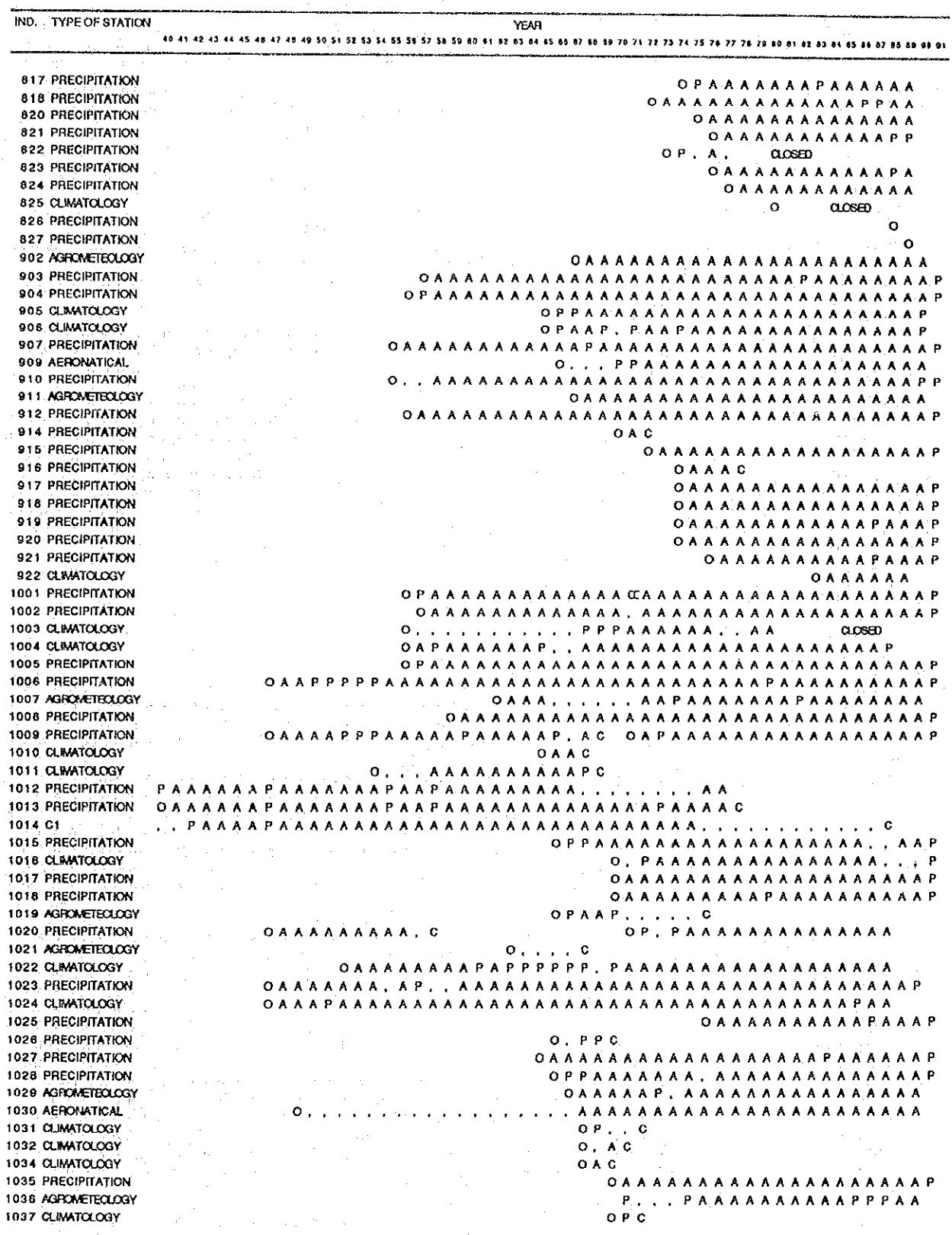

Table 4.14 PRECIPITATION DATA STORED IN DATA BASE IN 1991 (AUG. 1991)

IND.	TYPE OF STATION	YEAR 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
1038	CLIMATOLOGY	O A P P A A A A A A A A A A A A A A
1039	CLIMATOLOGY	O P P A A A A A A A P A A A A A A P
1040	PRECIPITATION	O P C
1041	PRECIPITATION	O P C
1042	PRECIPITATION	O C
1043	CLIMATOLOGY	O A A A A A A A A A A A A A A P A A P
1044	PRECIPITATION	O C
1045	PRECIPITATION	O C
1046	PRECIPITATION	O C
1047	PRECIPITATION	O A A A P A A A A A CLOSED
1048	PRECIPITATION	O C
1049	PRECIPITATION	O P A P A A A A A A A A A A A A A A A P A
1050	PRECIPITATION	O P C
1051	PRECIPITATION	CC
1052	PRECIPITATION	O A P P A A A A A A A A A A A A A P A A A P
1054	PRECIPITATION	O A A A A , , A A A A A A A A A A A A A P
1055	CLIMATOLOGY	O A A A A A A A A A A A A A A A A
1056	PRECIPITATION	O A A A A A A A A A A A
1057	CLIMATOLOGY	O A A A P A A A A A A A A P A P P
1058	PRECIPITATION	O A A A A A P A A A A A A A A P P P
1059	PRECIPITATION	O A A A A A A A A A A A A A A A A P
1060	PRECIPITATION	O A A A A A A A A A A A A A A A A P
1061	PRECIPITATION	O A A A A A A A A A A A A P
1062	CLIMATOLOGY	O , A A A A A A A P
1063	PRECIPITATION	O , , , A A A A A A A P A
1064	PRECIPITATION	
1065	PRECIPITATION	
1066	PRECIPITATION	
1067	PRECIPITATION	
1068	PRECIPITATION	
1069	CLIMATOLOGY	
1070	PRECIPITATION	
1071	CLIMATOLOGY	O
1072	CLIMATOLOGY	O
1101	PRECIPITATION	O A A A A A A A A A A A A P A P
1102	PRECIPITATION	O A A A A A A A A A A A A A A A A A A A A A A A A A A A A P
1103	AGROMETEOLOGY	O A P A A P P A A A A A A A A P A A A A A A P P A A P A A A
1104	PRECIPITATION	O A A A A A A A A A A A A A A A A A A A A A A A A A A A A P
1105	PRECIPITATION	
1106	PRECIPITATION	O P P A P A A , P P A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A P
1107	CLIMATOLOGY	O A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A , P
1108	PRECIPITATION	O A A A A A A A C O A A A A A A A A A A A A A A A A A P A A P
1109	PRECIPITATION	O A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A P
1110	PRECIPITATION	O , A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A P
1111	CLIMATOLOGY	O A A A P A A A A A A A A A A A A A A P
1112	PRECIPITATION	O P A P A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A P
1113	CLIMATOLOGY	O P P , , , , C
1114	AGROMETEOLOGY	O A A A A A A A A A A A A A A C
1115	PRECIPITATION	O P P P P A P A A A A A A A A A A A A P A A A A A A A A A A A A A A A A A A A P
1116	PRECIPITATION	O P A P A A A A P A P A A A A A A P A A A A A A C
1117	PRECIPITATION	O A A A A A A A A A A A A A P
1118	CLIMATOLOGY	O A P , P , , P P P A
1119	PRECIPITATION	O P A A A A A P P A A P P
1120	PRECIPITATION	O A A A A A A P P
1121	CLIMATOLOGY	O P A A , , P
1122	CLIMATOLOGY	O
1201	CLIMATOLOGY	O A A P P A P P , P A A A A A A A A A P A A A A A A A A A P A P P P P P CLOSED
1202	PRECIPITATION	O A A A , A A A A A P A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A
1203	PRECIPITATION	O P P A P A A A A A A P A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A
1204	PRECIPITATION	O , A A A A A A A A
1206	SYNOPTIC	O P A P P A A A A A P , P P A P A A A P A A A A A A A A A A A A A A A A A A A A A A A A
1207	PRECIPITATION	O A A A A A A A A A A A A A A A A A A A A A A A A A A A P A A A A A A A A A A A A A A A A
1208	C5	O A P A A A A A P A A A A A A , , , A A
1210	PRECIPITATION	O A A P P A A A A P A A A A A A A A A A A A A A A A A A P P A A A A A A A A A A A A P A A A A A A
1211	PRECIPITATION	O A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A

Table 4.14 PRECIPITATION DATA STORED IN DATA BASE IN 1991

(AUG. 1991)

IND.	TYPE OF STATION	YEAR 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 00 01 02 03 04 05 06 07 08 09 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
1212	CLIMATOLOGY	OP . . . PAAAAAAAA
1213	CLIMATOLOGY	OAAP . . . . APAAAAAAAAAAAAAAPAAAAAAAAAAAAAAAAA
1215	CLIMATOLOGY	OAAAAAAAAAAAAAAAAAAAPPAAAAAAAAAAAAAAA
1216	PRECIPITATION	OAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
1217	PRECIPITATION	O . PPAAAPPPAAAAAAAPAAAAP . A
1218	CLIMATOLOGY	OAPAAAAAAAAPPPPC
1219	PRECIPITATION	OPAAPAAAAAAAAAAC O . AAAAAAAAAAAAPA . A
1220	AGROMETEOLOGY	OAAAAAAAPAAAAAAAAAAAAAAA . P
1221	PRECIPITATION	O CLOSED
1222	PRECIPITATION	OAPAAAAAAAAAAAAAAA
1223	CLIMATOLOGY	OAPAAAAAAAAAAAAAAAA
1224	PRECIPITATION	OAAAAP . . PC OAPAAAAAAAAAAAAAAA
1225	SYNOPTIC	OPAAAAC
1226	PRECIPITATION	OPPAAAAAAAAAAAAA
1301	PRECIPITATION	OAAAAAAAAAAAAAAPPAAPAAAAAAAAAAAA
1303	CLIMATOLOGY	OAAAAAAAAAAAAAAAAAAAAAAAAAPAAAPAAAAAAAAAAAAAA
1304	AGROMETEOLOGY	OAAAAAAAAAAA
1305	PRECIPITATION	OPPAPPP . . . PAAA . AAAAAAAAAAAAAAAAAAAAAAAAAAAAA
1306	PRECIPITATION	OPPPPAAAAAAPAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
1307	SYNOPTIC	OPAPAPAAAAAAAAAAAAAAAAAAPAAAPAAAAAAAAAAAAPA
1308	PRECIPITATION	OAPAPAPP . . PAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
1309	PRECIPITATION	OAPPPAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
1310	C2	OAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA . . . . .
1311	PRECIPITATION	OAPPPAPPPAAAAAAAAAAPPAAAAAAPAAAAAAAAPAAAAAAAAA
1312	PRECIPITATION	OAAPAAAAA . PAAAAAAAAAAAAAAAAAAAAAAAA
1313	C5	OAAAAAAAAAAAAAAA . . . P . C
1314	CLIMATOLOGY	OP . . . PAAAAAPAAAAAAAAAAPAA
1315	PRECIPITATION	O . . . C
1316	PRECIPITATION	OAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPAAAAAAAAAAAAAAAA
1317	PRECIPITATION	OAAAAPAAAAAC OAAAAAAAAAAAAAAAA
1318	CLIMATOLOGY	OAAAPPAPAAPPAAAPAAAAP
1319	AERONATICAL	OPAAAAAAAAAAAAAAAAAAAAAA
1320	AGROMETEOLOGY	OPAAAAAAAAAAAAAAAAAAAAAA
1321	PRECIPITATION	OAAAAAAAAAAAA
1322	PRECIPITATION	OAAPAAAAAAAAAAAAAAAAAAAAAAAAAAAAPAAAAAAAAAAAA
1323	CLIMATOLOGY	OAPPPPPA . AAAAAAAAAA . P
1324	AGROMETEOLOGY	O . . . . .
1325	PRECIPITATION	OAP . . . . . AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
1401	CLIMATOLOGY	OAAAAAPPPAPPAAAAAAAAAAPAA . . . PAP
1402	C5	OPAAPPAP . . AAAAAAAAAAAAAAAAAAP
1403	PRECIPITATION	O
1404	PRECIPITATION	O
1405	SYNOPTIC	O
1406	PRECIPITATION	OPPPAAAAAAAAPAAAAAAAAAAAAAAPAAAAPAAAAAAAAAAAAAA
1407	AGROMETEOLOGY	OAAAAAAAAPAAAAPAAPAAAAAAAAAAAAAA . AAA
1408	PRECIPITATION	O . . . . . PAAAAAAAAAPAAAAPAAAAAAAAAAAAAAA
1409	PRECIPITATION	OP . AAAAAAAAAAAAAPAAAAAAAAAAAAAAAAAAA
1410	PRECIPITATION	OAPPAAAPAAAAAAAAAAAAAAA
1411	CLIMATOLOGY	OAA . . PAAAAAP . PAAAAAAAAAAAA
1412	PRECIPITATION	OAAAPPPAAAAAAAAAAAAA
1413	C5	OAAAPAC
1414	C5	OAAAPAC
1415	PRECIPITATION	OAAAAAAAAAAAAAAAAA
1416	CLIMATOLOGY	OAAAAAAAAAAAAAAAAAA
1417	CLIMATOLOGY	OPPPAAAAP CLOSED
1418	C4	OAAPAAAAAAAPAAAAAPPPC
1419	CLIMATOLOGY	OAAAAAAAAAAAA
1420	PRECIPITATION	OPPA . PAAAAAAAAAAAAAAAAAAAPAPAAA . AAAAAAAAAPAA
1421	CLIMATOLOGY	OAAAAA

NOTE

INDEX:
- 010 - 0299 FAR WESTERN REGION
- 030 - 0599 MID WESTERN REGION
- 060 - 0899 WESTERN REGION
- 090 - 1199 CENTRAL REGION
- 120 - 1499 EASTERN REGION

LEGE
- A : ALL DATA HAVE BEEN STORED
- P : PART OF DATA HAVE BEEN STORED
- C : STATION WAS CLOSED
- O : STATION WAS INSTALLED
- . : DATA HAVE NOT BEEN STORED YET

Source : MONITORING FORM COLLECTED BY THE CENTRAL OFFICE

Table 4.15 STAFF GAUGE READING STORED IN DATA BASE IN 1991 (1 / 2) (AUG. 20 1991)

ST.NO.	REG.	NAME OF SITES	1989 J F M A M J J A S O N D	1990 J F M A M J J A S O N D	1991 J F M A M J J A S O N D
5.7598					
100					A A A A P
120	F	KARKALE GAON	A A A A A A A A A A A A	A P P A A A A A A A A A	
150	F	PANCHESHWOR			A P
169.8	F	GUJAR GAON	A A A A A A A A A A A A	A A A A . . P A A A P A	
190.5	F	AMSARA	A A A A	A A A A A A A A A A A A	A A A P
205	M	KHARPU			
206	M	BIRI CHHARA	A A A A A P	. . . A A A A	
208	M	SURKHET	A A A A P	. . A A A	
209	M	KAWADI GHAT		. . A A A A A	
210	M	SURKHET	A A A A A	. . A A A .	
215	M	SURKHET	A A A A A A		
220	M	SURKHET	A A A A A A		
225	M	SURKHET	A A A A A A		
230	M	SURKHET	A A P P A A		
240	F	ASARA GHAT	A A A A A P	A A A P A A P . .	
241	M	SURKHET	A A A A P		
245	M	GITACHAUR	A A A A A P		
250	F	BENIGHAT	A A A A A P	A A A A . . . . A A . .	A A A P
251	F	CHAINPUR		. . . . . A A P P P . .	
255	F	KAXARSANT	A A A P	. . . . . A A P	A P
259.2	F	GOPAGHAT GAON	A P	. . . . . A A A A P . .	
260	F	BANGA NEAR BELGAON	A P P A A P	. . . . . A A A P . .	
262	F	KHANAYATAL	A A A A A P	. . . . . A A P . .	
265	M	RIMNA		A A A P	
267	M	SIMLI GHAT		A A A A P	
270	M	JAMU	A A A A A P		A A A P
280	F	CHISAPANI	A A A A A A P	. . . . . A A P .	
284	M	SHYALPIN			
285	F	KALAKUNTA	A A A A A P	. . . . . A . . .	
288	M	DARADHUNGA		A A A A A A A A P . . .	
287	M	SATTAR FARM	A A A A A P		
288	M	KOTHIYA GHAT	A P	A A A A A A A A P . . .	
289	M	GANGATE GAON			
289.5	M	SIRCHAUR GAON		A A A A A A A A P	
290		BARGADHA	A A A P		
327	M	KHUNGREE GAON		A A A A A A A A A P . .	
330	M	NAYAGAON		A A A A A A A A A P . .	
333	M	DEVISTAN		A A A A A A A A P . . .	
339.5	M	TIGRA GAON		A A A A A A A A A P . .	
340	M	KALIMATI - GHAT		. . A A A A	
350	M	BAGASOTI GAON		A A A A A P . A A A P .	
350.5	M	TINKHANNE GAON		A A A A A A A A A A P .	
360	M	JALKUNDI	. . P A A P	A A A A A A A A A P . .	
380	M	SINDHANIA			
385	M	SIWANAGAR			
387.4	W	KALIMATI	A A A A A A A A A A A A		
387.5	W	CHARCHARE	A A A A A A A A A A A A		
387.8	W	DUMAHI BAR	A A A A A A P		
390	W	BUTWAL	A A A A A A A A A A A A		
403	W	JOMSOM	A A A A A A A A A A A A		
404.6	W	KAUPUL BENI	A A A A A A A A A P . .		
404.7	W	MANGLA GHAT	A A A A A A A A A A A A		
406.5	W	NAYAPUL NEAR	A A A A A A A A A A A A		
409.5	W	SETI BENI	A A A A A A A A A A A A		
410	W	SETI BENI		A A A A A A A A A A A A	
415	W	DUMRICHAUR	A A A A A A A A A P .		
416.2	W	WAMITAKSAR	A A A A A A A A A A P		
417	W	RUDRABENI GULMI	A A A A A A A A A A A A		
419.1	W	ANSIGH - ANDHI GHAT			
420	C	KOTAGAON SHRINGE	A A A A A A A A A A P	. . . . . A A A A A A	
428	W	LAHACHOK	A A A A A A A A A A A A		
429.9	W	BAGAR			
430	W	PHOOLBARI	A A A A A A A A A A A A		
438	W	SHISA GHAT	A A A A A A A A A A A A		
439.3	W	KHUDI BAZAR	A A A A A A A A A A A A		
439.4	W	AMOTE BAGAR - SERA	A P . A A A A A A A A A		
439.7	W	BIMAL NAGAR	A A A A A A A A A A P .		
440	W	GARAM BESI	A A A A A A A A A A A A		
441	W	NAYASANGU GORKHA	A A A A A A A A P . . .		
445	W	ARUGHAT	A A A A A A A A A P . .		
445.3	W	ANKHU BRIDGE	A A A A A A A A A A A A		
446.2	C	SHYAPRUBESI	A A A A A A A A A A A A	A A A A A P	
446.3	C	DHUNCHE	A A A A A A A A A A A A	A A A A A A A A A A P .	
446.6	C	BETRAWATI	A A A A A A A A A A A .		
447	C	BETRAWATI			
447.4	C	RAUTAR NUWAKOT			
447.9	C	PATTAWARI NUWAKOT			
448	C	TADIPUL BELKOT	A A A A A A A A A A A .	A A A A A A A A A A A A	A A A A P
449.9	C	MUGLING			
449.95	C	BHORLETAR			
450	C	NARAYAN GHAT	A A A A A A A A A A A P	. . . . . A A A A A A	

Table 4.15 STAFF GAUGE READING STORED IN DATA BASE IN 1991 (2 / 2) (AUG. 20 1991)

ST.NO.	REG.	NAME OF SITES	1989 J F M A M J J A S O N D	1990 J F M A M J J A S O N D	1991 J F M A M J J A S O N D
460	C	RAJAIYA	A A A A A A A A A A A A	A A A A . . A A A A A A	P
465	C	MANAHARI	A A A A A A A A A A A A	A A A A A A P	A A P
470	C	LOTHAR	A A A A A A A A A A A A	P . . . . . A A A A A A	
505	C	SUNDARIJAL	A A A A A A A A A A A A	A A A A A A A A A A A A	
507	C	SUNDARIJAL		A A A A A A A A A A A A	
510	C	SHYAMDADO	A A A A A A	A A A A P P A A A A A A	
511	C	GAGALGAU			
520	C	GOKARNA			
530	C	GAURI GHAT	. . . . A A A A A A A A	A A A A A A A A A A A A	A A A P
538.2	C	BUDHANILKANTHA			
548	C	NAKHU JAIL			
550.1	C	SAMPKHEL		. . . . . P A A A A A A	
589	C	PANDHERA DOBHAN	A A A A A A A A A A A A	A A A P . P A A A A A A	. P
593	E	CHISAPANI			
599	E	INARWA	A A A P		
600.05	E	SEKSILA HATIYA			
600.1	E	UWA GAON			
601.8	E	KURLE BESI			
601.9	E	KURLE BESI			
602	E	TUNUNGTAR			
602.5	E	PIPLETAR			
604	E	LEGUWA GHAT			
604.5	E	TURKEGHAT			
606	E	SIMLE			
610	C	BARABISE	A A A A A A A A A A A A	A A A A A A A A A A A P P	
612	C	BARABISE	A P . . P A A A A A A A	A A A A A A A A A A A A	A A A A A P
620	C	JALBIRE	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A A A P
625	C	DOLALGHAT	A A A A A A A A A A A A	A A A A A A A A A A A A	A A A A P
627.5	C	HELAMBU	. . . . . A A A	A A A A A A A A A A A A	A A A P
629	C	DOLAL GHAT	A A P . . . A A A A A A	A A A A A A A A A A A P	A A A A A A A P
629.1	C	DOLAL GHAT		A A A A A A A A A A A A	A A A A A A A P
630	C	PACHUWAR GHAT	A A A A A A A A A A A A		A A A A
640	C	PANAUTI		. P A A A A A A A A A A	P
647	C	BUSTI	A A A A A A A A A A A A	A A A A A P	
650	C	RASNALU VILLAGE	A A A A A A A A A A A A	A A A A A A A A A A A A	A P
652	C	KHURKOT	. A A A A A A P	P A A A P P A A A A A A	A A A A P
660	C	SANGUTAR	A P . P A A A A A A A A	P . . . P A A A A A P .	
665	E	AHAKAPUR (TOKSELGHAT)			
668.4	E	BENI			
668.5	E	SALME			
670	E	RABUWA BAZAR			
680	E	KAMPUGHAT			
681	E	HAMPUACHUWAR			
684	E	MAJHITAR			
688.7	E	DHANKUTA			
689	E	BIRETAR NEAR DHANKUTA			
690	E	MULGHAT			
691	E	TRIBENI			
695	E	CHATARA-KOTHU			
728	E	RAJDWAL			
730	E	SAJBOTE (ILAM)			
738	E	ANGDANG			
795	E	MAINACHULI			
799	E	KUMARKHOD - JHAPA	. . . . A A A A A A A P		

NOTE

REG.
- F : FAR WESTERN
- M : MID WESTERN
- W : WESTERN
- C : CENTRAL
- E : EASTERN

- A : ALL DATA IS PROCESSED
- P : PART OF DATA IS PROCESSED
- O : STATION WAS OPEND
- . : DATA HAS NOT ENTER

SOURCE : THE DHM STAFF INVESTIGATED EACH DATA IN THE PESENT DATA BASE

Table 4.16 MEAN DAILY WATER LEVEL DATA STORED IN DATA BASE IN 1991 (June,1991)

ST.NO.	NAME OF RIVER	NAME OF SITES	YEAR
			60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
5.7598			
100			
120	CHAMELIA	KARKALE GAON	P P P . . . . . P P P . . . . P A A P
130	MAHAKALI	RATAUDA	. . . . . P P P P P . P . P P P P
140	KANSANIGAR	GITHEGARA	. . . . . P P
150	MAHAKALI	PANCHESHWOR	
169.8	SURNAGAD	GUJAR GAON	P P P
170	SURNAGAD	PATAN NEAR BAITADI	N P A A P A A A A A A A A A A A A A A P P P
170.4	BAGADI	PATAUTI GAON	P P
170.5	AGRE GAD	HW SITE DHUNGRI	P P P
180	UNI KHOLA	ULLANI - DANDELDHURA	
189	MAHAKALI	BRAHMADEV GAON	P P P
190	MOHANA	MALAHETI GAON	. . . . . P P P
190.5	KANDRA KHOLA	AMSARA	P P P
190.6	GURGI KHOLA	UJALI SEMAR	P P P P A P
190.8	KHUTIYA KHOLA	BOLADEVI GAON	P P P
200	HUMLA KARNALI	NALLA	. . . . A P A A A P P A A A P
205	KHARPU KHOLA	KHARPU	P P P A P A . A A P
206	HUMLA KHOLA	BIHI CHHARA	P P P . A . A P P
207	MUGU KARNALI	CHATA BAGAR	P A A P A . P . A A P
208	MUGU KARNALI	SURKHET	P P . P . P P P P P
209	KAWADI KHOLA	KAWADI GHAT	
210	RARA DAHA	SURKHET	. . . . . P P . . . . . A P P
212	KUNNA KHOLA	JAILEE GAON	P P P P P
215	HUMLA KARNALI	SURKHET	. . . . . A A A A A P A P A A P
216	JUWA KHOLA	URTHU	. . . . . A A A A A A A . A P P
217	RIRI KHOLA	SANUSANGU CHAUTARA	A A A P
217.1	TILA NADI	DHITA	. . P A P
218	JUGAD KHOLA	JUMLA KHAULENI	. . . . . A P
218.1	TILA NADI	HANKU	. . P P P
219	GIRI KHOLA	HANKU	. . A A P
220	TILA NALA	SURKHET	. . . . . A A A A A A A P A A P
221	BHERI KHOLA	SANPULI	. . A P
225	SINJA KHOLA	SURKHET	. . . . . A A A A A A A A A A P
230	TILA NADI	SURKHET	. . . . . A A P . P A A P A P P
240	KARNALI	ASARA GHAT	. N A N N N A A A A A A A A A A A A A A A A A A A A A A A
241	LOHARE KHOLA	SURKHET	. . . . . A A A . . . . . A P
242	LOHARE KHOLA	SIMARA	P P P P P P
243	KATTI KHOLA	LAMIJHARI	P A . A P P
244.5	CHAMGHAT KHOLA	GITACHAUR	A P P
245	CHHAMGHAT KHOLA	GITACHAUR	P A A A A A . . A P
246	RAMGAD KHOLA	SIYALAGHAT	P . P A A P
247	PADUKA KHOLA	PALI	P A . A P P
250	KARNALI	BENIGHAT	P A A A A A A A A A A A A A A A A A A A A A A A A A P . N
251	SETI	CHAINPUR	
252	DUNG GAD	SALERI	P A P P
254	KAILASH KHOLA	CHITRE	. A P A . . P P P
255	BHDHI GANGA	KAKARSANT	P A A P A A A A A P
259.2	SETI	GOPAGHAT GAON	P P P
259.6	TUNA GAD	WUMADI GAON	P P
259.7	DOTI KHOLA	CAUDELIKOT GAON	P P P
259.8	JARYAL KHOLA	LAXMINAGAR GAON	P P P
260	SETI	BANGA NEAR BELGAON	A A A A A A A A A A A A A A A A A A A A A A A A A A P . A
261	THULI GAD	KURI GAUN	. . . A P P

Table 4.16 MEAN DAILY WATER LEVEL DATA STORED IN DATA BASE IN 1991 (June,1991)

ST.NO.	NAME OF RIVER	NAME OF SITES	YEAR
			50 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
262	TULI GAD	KHANAYATAL	P N P A P N P A A A A A A A P P P P A A P A A A A A P A
264	NAL GAD	DALLI	. P P
265	THULO BHERI	RIMNA	. . . . . A P A A A P A A A A P
267	SANO BHERI	SIMLI GHAT	. . . . . A P A A A P A A A A P
268	SORUGHAT	DUNGILA	P P
269	SUWAGAD	TAWLE	P P
270	BHERI	JAMU	A A A A A P A P A A A A A A A A A A A A A A A A A A P
271	GOCHE KHOLA	KOPCHI	P A . P P
272	MANGRA KHOLA	PAGMA	P P A A P P
273	BATTISE KHOLA	TARANGA	. . . A A P
274	CHINGAD KHOLA	BANLAGE	P P P P P
274.5	CHINGARA KHOLA	GANGTE - SATAKHANI	. P A P P P P
280	KARNALI	CHISAPANI	A A A A A A A A A A A A A A A A A A A A A A A A A A A P . P
284	SARDA KHOLA	SHYALPANI - SITA PALL	P P . . . . P A P P P
285	MOHANA	KALAKUNTA	. A A A A A A A . A P P . . A
285.8	MOSK KHOLA	MAINE GAON	. . A P P
286	SARADA KHOLA	DARADHUNGA	A P P A A A A A A A A A A A A P
287	KAURIALA KARNALI	SATTAR FARM	
288	GERUWA KARNALI	KOTHIYA GHAT	P A A . . P P P
289	BABAI	GANGATE GAON	. . . . . P P . . . P . . P P
289.2	HAPUR KHOLA	HAPUR - NAREBANG	. . . P P
289.5	GOHAR KHOLA	SIRCHAUR GAON	. . . . . P A
289.7	SIR KHOLA	SIR GAON	. . . . . A P A
290	BABAI	BARGADHA	. P P A P A A A A N N A A A A A A A A A A P
295	MAN	SONAPUR GAON	. P P P P
326.8	PHAGAM KHOLA	PHARSACHAUR GAON	. . . . . P P P
327	LUNGRI LHOLA	KHUNGREE GAON	. A P P P . . . . P P
328	MARI LHOLA	KHUNGARI CHAUR	
330	MARI LHOLA	NAYAGAON	N P A A A A A A A A A A A A P A P A A A A A A P P P
333	ARUN KHOLA	DEVISTAN	. . . . . P P P P P P P P A P P
339	JHIMRUK KHOLA	CHERNETA GAON	
339.5	JHIMRUK KHOLA	TIGRA GAON	P A A A A A A A P A A A A A A A P A A
340	JHIMRUK KHOLA	KALIMATI - GHAT	P A A A P A P N N N N N N N N N N N N N N P
350	RAPTI	BAGASOTI GAON	P A A A A A A A A A A A A A A P P P
350.5	RANGSING KHOLA	TINKHANNE GAON	. . P P P
351	ARJUN KHOLA	KULMUR GAON	. P P
360	RAPRI	JALKUNDI	P P P P P P P A P A A P P A A A A A A A A A
370	RUNDUWA	WUJELISEMAR GAON	. A P . A A . A P A P P
370.5	ROHANI KHOLA	MRM BR. CHATAR	. P P A P
380	RAPTI	SINDHANIA	. . . A
385	SURAHI KHOLA	SIWANAGAR	P P P
386	SURAI KHOLA	KRISHNANAGAR	
386.4	GHORAI KHOLA	KRISHNANAGAR	
387.4	DUMRE KHOLA	KALIMATI	P P P P A P A
387.5	MADI TINAU	CHARCHARE	P A A A P A A
387.8	JHUMSA KHOLA	DUMAHI BARI	. P P
388	JHUMSA KHOLA	JHUMSA	A A P . . . P P
389	TINAU KHOLA	INTAKE SITE	P P P P P P
389.4	DOBHAN KHOLA	JARKOT	. P
389.5	DOBHAN KHOLA	DOBHAN	P A P . . . . P
390	TINAU KHOLA	BUTWAL	N . . . . . A A A A P P P A A A P P P P P A
391	DANAB KHOLA	ORLAWA	. . . . . P A A A P P P A A P
391.1	TELAHARI	MANTRIPALTA	. . . . . P A
391.2	HARAWANALA	S.S. ROAD	. . . . . A
391.3	PURANO NAHAR	LUMBINI	. . . . . P A

Table 4.16 MEAN DAILY WATER LEVEL DATA STORED IN DATA BASE IN 1991 (June,1991)

ST.NO.	NAME OF RIVER	NAME OF SITES	YEAR
			60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
391.4	TELAHAR	LUMBINI	. . . . . P P
395	BANGANGA	BANGACHIA NEAR TAULIHAWA	
403	KALI GANDAKI	JOMSOM	. . . . . P P P P A P . . P A P
404	RAUGHAT KHOLA	GALESWAR RAKHUGHAT	. . P P P P P P . . P P
404.6	KALI GANDAKI	KALIPUL BENI	N N N N N N A P N N N N N N P P P P P
404.7	MYAGDI KHOLA	MANGLA GHAT	. . P P . . A . . . A A A P P
404.8	KALI GANDAKI	KHANYA GHAT	. . . . . P P . . . . . P
405	KANTHE KHOLA	BAGLUNG	. . . . . P P
406.5	MODI KHOLA	NAYAPUL NEAR JHAPRE BAGAR	. A P A P P N N N A P P
407.4	LAMAYA KHOLA	ASURE	. . . . . A A
407.5	KHALTE	JARWA	. . . . . P A
409.5	SETI KHOLA	SETI BENI	. . P . . P . . . A A
410	KALI GANDAKI	SETI BENI	P P P P P P A A A A A P A A A A A A A A A N N N N P
413.1	SETI KHOLA	SETI DOVAN	. . . . . A A
414	DARAUN KHOLA	ARJUN CHAUPARI	
415	ANDHI KHOLA	DUMRICHAUR ANDHIMUHAN	P P P P A P P P P A A A A A A A A A A A P P P P A
416	KALI GANDAKI	ANGSING	
416.2	DARAM KHOLA	WAMITAKSAR	. . . . . P P P
416.3	NISTI KHOLA	JHAKLE	. . . . . P
416.5	HUGDI KHOLA	GEKHUNG	. . . . . P
417	BADIGAD KHOLA	RUDRABENI GULMI	. . . . . P A A A A A P . P A A A
418	RIDI KHOLA	RIDI BAZAR	. A A . P
419	BARANDI KHOLA	GAIGHAT TANSING	. . . . . P
419.1	KALI GANDAKI	ANSIGH - ANDHI GHAT	
419.5	JAGDI KHOLA	DANSING	. . . . . P P
419.6	NISTI KHOLA	RAMPURTAR	. . P P . P
419.8	DEUSAT KHOLA	BULINGTAR	P P P P . P P A
420	KALI GANDAKI	KOTAGAON SHRINGE	P A A A P A P A A A A A A A A A A A P A A A P P P P P
428	MARDI KHOLA	LAHACHOK	. . . . . A A P P P P . . P P P
428.1	HARPAN KHOLA	SERA BESI	. . P
428.5	YAMDI HKOLA	UPALLOHEMJA	. . . . . P P
429.9	SETI IRRG. CANAL	BAGAR	
430	SETI	PHOOLBARI	P P P P A P A P A A P P P A A A A A A P A P
431	BIJAYAPUR KHOLA	ARYA VILLAGE	. . A P . . . . . A A A
433.3	BEGNAS TAL	BEGNAS	
433.4	RUPA KHOLA	MOHAN DANDA	. . . . . A A A
433.5	KHUDI KHOLA	BEGNASTAL	. . . . . A A A
435	HARPAN PHEWA KHOLA	CHANKHAPUR	. . . . . P . . . . . A
437.5	MIDIM KHOLA	BHORLETAR	. . . P P
438	MADI	SHISA GHAT	. . . P P P P P P P P . A A A
439	SETI KHOLA	SARANG GHAT NEAR BANDIPUR	
439.2	NADI KHOLA	NADI BAZAR	. . . . P A
439.3	KHUDI KHOLA	KHUDI BAZAR	P P P A A A A
439.4	DORDI KHOLA	AMOTE BAGAR - SERA BESI	. . . . . A A P
439.5	PAUDI KHOLA	PAUDI DHIK	. . P
439.6	CHEPE KHOLA	BHANSAR BESI	P P A
439.7	MARSYANGDI	BIMAL NAGAR	
439.8	MARSYANGDI	GOPLING GHAT	P P A
440	CHEPE KHOLA	GARAM BESI	. P P P P P A A A A A A P A A A A A A A A A A A
441	DARAUNDI KHOLA	NAYASANGU GORKHA	. . . . . A A A A A P . P P A
441.5	DARAUNDI KHOLA	RAMDI	
444.6	BURHI GANDAKI	JAGAT SETIBAS	. . . . . P P
445	BURHI GANDAKI	ARUGHAT	. P P P A P A P A P A P A A A A A A A A A A A P P
445.1	STOOL KHOLA	ARUGHAT	. . . . . P A
445.2	TANDRA KHOLA	GORKHA	. . . . . P

Table 4.16 MEAN DAILY WATER LEVEL DATA STORED IN DATA BASE IN 1991 (June,1991)

ST.NO.	NAME OF RIVER	NAME OF SITES	YEAR
			60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
445.3	ANKHU KHOLA	ANKHU BRIDGE	. . . . . A A A P . P A A P A
446	BHOTE KOSHI	RASUWA TIMURE	N P
446.15	LIRUNG KHOLA	KYANGJIN	N N
446.2	LANGTANG KHOLA	SHYAPRUBESI	N P P P P P P P P
446.3	TRISULI KHOLA	DHUNCHE	. . . . . P A P P P P P P P P P P P P P P P P P P
446.6	SALANKHU KHOLA	DHOKA PHEDI	
446.8	PHALANKHU KHOLA	BETRAWATI	. . A A A A A A A A A A A A A A A A A P P P P
447	TRISULI	BETRAWATI	. . . . . A A A A A A A A A A A A P A P P
447.1	SAMARI KHOLA	BAGUWA TRISULI	
447.4	TADI KHOLA	RAUTAR NUWAKOT	P P
447.49	LIKHU KHOLA	PHURKESALLA NEAR NUWAKOT	
447.5	TRISULI	MAHARANI	P
447.51	GHATTE KHOLA	KAPHAL DANDA	
447.52	LIKHU KHOLA	CHHAHARE NEAR NUWAKOT	
447.54	CHAHARE KHOLA	CHHAHARE NEAR RANI PAUWA	
447.6	LIKHU KHOLA	BOKSI DAHA	. . . . . P
447.7	CHAHARE KHOLA	THAPA GAON	
447.78	GHATTE KHOLA	RANI PAUWA	
447.8	SINDURE KHOLA	MALKOT NUWAKOT	. . . . . A
447.9	LIKHU KHOLA	PATTAWARI NUWAKOT	P P P P P P A A P P
448	TADI KHOLA	TADIPUL BELKOT	. A A A A A A A A A A A A A A A A A A P P P P
448.5	KOLPU KHOLA	KOLPUTAR	
448.6	MAHESH KHOLA	GALCHI	
449.4	BELAKHU KHOLA	BELAKHU BAZAR	
449.7	MALEKHU KHOLA	RICHOKTAR DHADING	
449.9	TRISULI	MUGLING	
449.95	TRISULI	BHORLETAR	P P P A
450	NARAYANI	NARAYAN GHAT	. P P P A A A A A A A A A A P A A A A A A A A A A P P
452	RAPTI	GOPLING BHIMPHEDI	
453	RAPTI	THANSING BHIMPHEDI	
454	RAPTI	PANDRANG BHIMPHEDI	
455	RAPTI	BHAINSE DOBHAN	. . . . . P P P P P P A P P P
456	SAMARI KHOLA	SUPARITAR	. . . . . P P
457	RAPTI	HETAUDA	
458	KARRA KHOLA	KARRA NEAR HETAUDA	. . . . . A P P P P P
460	RAPTI	RAJAIYA	P P P A A A A A A A A A P A A P A A A P A A A A A A P
465	MANAHARI KHOLA	MANAHARI	P A A P A A A A A A A A A A A A A A A A A A A A P P
470	LOTHAR KHOLA	LOTHAR	. A A P A A A P A P A P P A A A A A A A A A A P A A
475	KHAGERI KHOLA	TIKOLI	
475.4	CHAHARI KHOLA	RANIPAUWA	
478	KAIR KHOLA	SAKTIKHOR	
480	KAIR KHOLA	JURRPANI	. . . . . P
485	BURI RAPTI	CHITRASARI	. . . . . P . . . . . A P . P P . A A A P
495	BINAYA KHOLA	DUMKIBAS	. . . . P
502	MASLARE KHOLA	CHILAUNE GAON	N
503	DONDARE KHOLA	CHILAUNE GAON	
505	BAGMATI	SUNDARIJAL	. A A A P A A A A A A P A A A A A A A A A A A A A P . A A
507	NAGMATI	SUNDARIJAL	. . . . . P A P A A A P A A P P
510	SIALMATI	SHYAMDADO	. . . . . A P A A A A P A A
511	DHAKAL KHOLA	GAGALGAU	N N
520	BAGMATI	GOKARNA	. . . . . A A P P A A P P A
525	MANOHARA KHOLA	BISAM BARA	. . A A A A P A P A A P
527	KAGESWARI KHOLA	GAGALGAU	
529	BALKHU KHOLA	NAIKAP - GARI GAON	A A A P
530	BAGMATI	GAURI GHAT	P A A P P P P P A N N N P P A P P A P A A P

Table 4.16 MEAN DAILY WATER LEVEL DATA STORED IN DATA BASE IN 1991 (June,1991)

ST.NO.	NAME OF RIVER	NAME OF SITES	YEAR
			60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
531.5	SALINADI	SANKHU	
532	MAHADEV KHOLA	JITPUR NEAR BHAKTAPUR	
532.5	HANUMANTE KH-TR.	KATUNJE NEAR BHAKTAPUR	
532.8	HANUMANTE KHOLA	BHAKTAPUR	
533	GODAVARI KHOLA	GODAVARI	. . . . . N
534	KODHU KHOLA	THAIBO NEAR PATAN	
534.5	DHOBI KHOLA	DILLI BAZAR	
535	BAGMATI	TEKUDOBHAN	
536	BISHNUMATI KHOLA	THARTHOK	
536.2	BISHNUMATI KHOLA	BUDHANILKANTHA	. A A A A A P A A A A A A A A P A A A
537	BISHNUMATI KHOLA	TEKUDOBHAN	
539	NAKHU KHOLA CANAL	TIKA BHAIRAB	. . . . . N
539.7	LELE LHOLA	TIKA BHAIRAB	. . . . . P P P P P P P P P P
540	NAKHU KHOLA	TIKA BHAIRAB	. P A A A P A A A P A A A A A A A A A P P A A P
548	NAKHU KHOLA	NAKHU JAIL NEAR PATAN	
550	BAGMATI	CHOVAR	. A A A A A P A A A A P A A A A P A A P P P P P
550.1	BAGMATI	SAMPKHEL	P P P
558	SANKHAMUL KHOLA	TRIBHUWAN RAJPATH	
559	PALUNG KHOLA	PALUNG	P P P P P P P A A
560	THADO KHOLA	DARKOT - MARKHU	. . . . . A P P
565	KULEKHANI KHOLA	LAMICHAUR	P A A A
570	KULEKHANI KHOLA	KULEKHANI	P P A P P P A A A P A A A A A N
571	SIM KHOLA	KULEKHANI	
572	CHAKHEL KHOLA	SUKAURA	
580	KOKHAJOR KHOLA	KOKALI NEAR HARIHARPUR	
585	MARIN KHOLA	KUSUMTAR - SINDHULI	
589	BAGMATI	PANDHERA DOBHAN	N P P P P P P P P
590	BATGMATI	KARMAIYA - MANGALPUR	P P P P P P A A P A A A P P A A P P A P A P
592	MAGMATI	BRAMHAPURI	P P
598	KAMALA	CHISAPANI	
599	KAMALA	INARWA	P P
600.05	BARUN KHOLA	SEKSILA HATIYA	
600.1	ARUN	UWA GAON	P A A P P A A A P P A P N P A A P
601	IRKHUA KHOLA	MAJHUWA BESI	. . . . . A P
601.1	CHIRKHUWA KHOLA	BALUWA BESI	P A P
601.8	PANGTHA KHOLA	KURLE BESI	A P
601.9	PANGMA KHOLA	KURLE BESI	A A
602	SABHAYA KHOLA	TUMLINGTAR	P A P A P P P A A P P P A P
602.5	HINWA KHOLA	PIPLETAR	P P P A A A P P A P A A
603	PILUWA KHOLA	MADIBESI	. . . . . P
603.9	LEGUWA KHOLA	LEGUWA GHAT	
604	ARUN	LEGUWA GHAT	. . . . . P . . . . . P P P
604.3	MANGMAYA KHOLA	HATIKHARKA - KAGUNE	. . . . . A
604.5	ARUN	TURKEGHAT	P A A A A A A A A A A A A A
605	PIKHUWA KHOLA	PARAPANI PHEDI	. . . . . P . . . . . P A
606	ARUN	SIMLE	P
610	BHOTE KOSI	BARABISE	P A P A P A P P A A A A A A A A P A A A A A P P P A
612	SUN KOSI	BARABISE	
619.5	BOKSE KHOLA	JALBIRE	
620	BALEPHI KHOLA	JALBIRE	. A A A P A P A A A A A A A A A A A A A A A A A P A A P
622	TIMBU KHOLA	TIMBU NEAR NURBUGAON	
624	GHYALTHUM KHOLA	GHYALTHUM NEAR PALCHOK	
625	SUN KOSI	DOLALGHAT	P P P A A A A P
627	THADO KHOLA	KARGACHHAP NEAR THAKLE	
627.5	MELAMCHI KHOLA	HELAMBU	P A P

Table 4.16 MEAN DAILY WATER LEVEL DATA STORED IN DATA BASE IN 1991 (June,1991)

ST.NO.	NAME OF RIVER	NAME OF SITES	YEAR
			60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
628	SINDHU KHOLA	BAUNNE PALI NEAR THAKLE	
629	INDRAWATI	DOLAL GHAT	. . . . . P . . . . P P . P P P P P
629.1	INDRAWATI	DOLAL GHAT	P A A A A A A A A P P N
629.2	CHAK KHOLA	DOLAL GHAT	
630	SUN KOSI	PACHUWAR GHAT	P P A A P A A P P A A A A A A A A A A A A A P P A P
640	ROSI KHOLA	PANAUTI	. P P P A A P A P A P P P A A A A A P P A A A A A
640.5	PUNYAMATI KHOLA	NALA	
646	DOLTI KHOLA	NAGDAHA	. . . . . P A P P A . A A
647	TAMAKOSI	BUSTI	. A A A A A A A A A A A A A A A A P
647.5	CHARANGE KHOLA	MAHADEV BESI	P P
649.5	JIRI KHOLA	JIRI	
650	KHIMTI KHOLA	RASNALU VILLAGE	P P A P A A A P A A A A A A A A A A A A A P
652	SUNKOSI	KHURKOT	P A A A A A A A A A A A A A A P A A P A A A P P P
660	LIKHU KHOLA	SANGUTAR	P P A A A A A A A A A A A A A A A P A A A A A P P P P
662	MOLUNG KHOLA	RAMPURTAR	
663.5	POKTING KHOLA	RAMPURTAR	
665	SUN KOSI	AHPKAPUR (TOKSELGHAT)	P P
668	IMJA KHOLA	NAMCHE	P
668.4	TAKTOR KHOLA	BENI	A P
668.5	SOLUA KHOLA	SALME	A
669.5	RAWA KHOLA	GAIKHURE	. . . . . A A
670	DUDH KOSI	RABUWA BAZAR	P P P A A A P P A A A A A A A A A A A A P A A P P
671	THOTNE KHOLA	RABUWA BAZAR	
671.5	THOTNE KHOLA	RUMJATAR	
676	DHIPLUNG KHOLA	GOGANE	
680	SUN KOSHI	KAMPUGHAT	P P P A A A A A A P A A A A A A A A A P A P P
681	SUN KOSHI	HAMPUACHUWAR	A P
684	TAMUR	MAJHITAR	P P P
685	TAMUR	SINWA NEAR TAPLJUNG	
685.2	MEWA KHOLA	KHAMLUNG NEAR TAPLEJUNG	
685.3	MAIWA KHOLA	MAIWA DOVAN	. . A A . . . . . A P
685.6	NAMDU KHOLA	LALIKHARKA	P
685.9	HIMA KHOLA	THAPATAR (PHIDIM)	. . . P . . . . . N A P
686	KOYA KHOLA	KHALE VILLAGE	
687	KHORANG KHOLA	LAMEBAGAR	
687.5	SINDUWA KHOLA	SIKHIMBA	
688.5	MADHU KHOLA	DHANKUTA	. . . P P
688.6	BANCHARE KHOLA	DHANKUTA	. . . . . A P
688.7	NIBUWA KHOLA	DHANKUTA	P P
689	TANKHUWA KHOLA	BIRETAR NEAR DHANKUTA	. . . . . P
689.5	DHANKUTA KHOLA	MULGHAT	
690	TAMUR	MULGHAT	A A A A A A A A A A A A A A A A A A A A A A P
690.5	LEUTI KHOLA	UKHU DANDA	
691	TAMUR	TRIBENI	P P
695	SAPTA KOSHI	CHATARA-KOTHU	A A P P P A A A A A A A
697.5	TRIJUGA	FATEHAPUR	
698	SARDU KHOLA	MATHILO SARDU - DHARAN	. . . . . P A
715	MAI KHOLA	MAI BENI	. . . . . A P
720	JOG MAI KHOLA	MAI BENI	. . . . . A . . . . . P A P
725	SOYANG	BESI DANDA	P
728	MAI KHOLA	RAJDWAIL	A A A A P
730	PUWA KHOLA	SAJBOTE (ILAM)	P P A P P A A P P A A P P A P A P P A A P A P
738	DEO MAI KHOLA	ANGDANG	A P
738.5	DEO MAI KHOLA	SABJUNG	P
740	DEO MAI	LENGLENGKO - ANGDANG	. . . . . P P

Table 4.16 MEAN DAILY WATER LEVEL DATA STORED IN DATA BASE IN 1991 (June,1991)

ST.NO.	NAME OF RIVER	NAME OF SITES	YEAR
			60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
770	KANKAI MAI	CHEPTI	P A A P P A P A P P P
772	TANGTIN NADI	BELTAR NEAR ILAM	
775	BERING KHOLA	HOKSE NEAR ILAM	
795	KANKAI MAI	MAINACHULI	P A A A A A A A A A A A A A P P P
798	KANKAI	CHAURIGAON	
799	KANKAI	KUMARKHOD - JHAPA	
848.4	SIDDHI KHOLA	KAJENI	, , , , , P A P
848.5	SIDDHI KHOLA	SALAKPUR	P
850	MECHI	BHADAPUR	

LEGEND

, : NO RECORD
P : PART OF DATA IS STORED
A : ALL DATA IS STORED
N : NOT AVAILABLE

Source : MONITORING FORM COLLECTED BY THE CENTRAL OFFICE

Table 4.17 MEAN DAILY DISCHARGE RECORD STORED IN DATA BASE IN1991 (AUG. 27 1991)

ST.NO.	REG.	NAME OF SITES	YEAR
			60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91
240	F	ASARA GHAT	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
250	F	BENIGHAT	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
260	F	BANGA NEAR BELGAON	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
262	F	KHANAYATAL	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
270	M	JAMU	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
280	F	CHISAPANI	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
286	M	DARADHUNGA	A A A A A
290		BARGADHA	
330	M	NAYAGAON	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
339.5	M	TIGRA GAON	
340	M	KALIMATI-GHAT	A A A A A A A
350	M	BAGASOTI GAON	A A A A A A A A A A
360	M	JALKUNDI	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
390	W	BUTWAL	A A A A A A
410	W	SETI BENI	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
415	W	DUMRICHAUR	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
420	C	KOTAGAON SHRINGE	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
430	W	PHOOLBARI	A A A A A A A A A A A A A A A A A A A A A A A A A A
439.8	W	GOPLING GHAT	A A A A A A A A A A A A A A A A A A A A A A A A
440	W	GARAM BESI	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
445	W	ARUGHAT	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
446.8	C	BETRAWATI	A A A A A A A A A A A A A A A A A A A A A A A A
447	C	BETRAWATI	A A A A A A A A A A A A A A A A A A A A A A A A A A
448	C	TADIPUL BELKOT	A A A A A A A A A A A A A A A A A A A A A A A A A A
450	C	NARAYAN GHAT	A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A
460	C	RAJAIYA	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
465	C	MANAHARI	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
470	C	LOTHAR	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
505	C	SUNDARIJAL	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
536.2	C	BUDHANILKANTHA	A A A A A A A A A A A A A A A A A A A A A A A A A A
550	C	CHOVAR	A A A A A A A A A A A A A A A A A A A A
550.1	C	SAMPKHEL	
589	C	PANDHERA DOBHAN	A A A A A A A A
590	C	KARMAIYA-MANGALPUR	A A A A A A A A A A A A A A A A A A A
600.1	E	UWA GAON	
604.5	E	TURKEGHAT	A A A A A A A A A A A A
610	C	BARABISE	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
620	C	JALBIRE	A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A
630	C	PACHUWAR GHAT	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
640	C	PANAUTI	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
647	C	BUSTI	A A A A A A A A A A A A A A A A A A A A A A A A A A
650	C	RASNALU VILLAGE	
652	C	KHURKOT	A A A A A A A A A A A A A A A A A A A A A A
660	C	SANGUTAR	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
670	E	RABUWA BAZAR	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
680	E	KAMPUGHAT	A A A A A A A A A A A A A A A A A A A A A A A A A A A A
690	E	MULGHAT	A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A
695	E	CHATARA-KOTHU	A A A A A A A A A A A A A A
728	E	RAJDWAIL	A A A A A
730	E	SAJBOTE (ILAM)	A A A A A
795	E	MAINACHULI	A A A A A A A A A A A A A A A A A A A A A A

Legend: REG. Region F: Far-Western Region M: Mid-Western Region W: Western Region
C: Central Region E: Eastren Region A: Data exiate

Source: DHM

Table 4.18 CONDITION OF SEDIMENT CONCENTRATION DATA ENTRY IN 1991 (22, SEP. 1991)

ST. ON.	NAME OF RIVER	NAME OF SITE	YEAR																															
			60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
240	KARNALI RIVER	ASARA GHAT	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	P	P	P	P	P	P	N						
260	SETI RIVER	BANGA NEAR BELGON			,	,	,	,	,	,	,	,	,	,	,	P	,	P	P	P	P	P	P	P	,	P								
270	BHERI RIVER	JAMU			,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	P								
280	KARNALI RIVER	CHISAPANI	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
286	SARDA KHOLA	SHYALPANI-SITA PALI												,	P	P	N	P	P	P	P	,	,	,	P	P	P	P	A				
350	RAPTI RIVER	BAGASOTI GAON														,	P	P	P	,	,	P	P	P	P	P	P	P	P	P			
360	RAPTI RIVER	SINDHANIA				,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	P			
410	KALI GANDAKI	SETI BINI				,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	N	P	P	P	P	P	P	
430	SETI RIVER	SHISA GHAT				,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	P	P												
439.7	MARSYANGDI	BIMAL NAGAR																											,	,	N	P		
439.8	MARSYANGDI	GOPLING GHAT														,	,	,	,	,	,	,	,	,	,	P	P	,	,	,	,	,	N	
445	BURHI GANDAKI	ARUGHAT		,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	N	P	
447	TRISULI	BETRAWATI							,	,	P	,	,	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P				
450	NARAYANI	NARAYAN GHAT	,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	P	P	P	P	P	P	P	P				
470	LOTHAR KHOLA			,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	P	,	,	P	N							
550	BAGMATI RIVER	CHOVAR	,	,	,	,	P	A	N	N	N	P	P	P	P	P	P	P	P	P														
550.1	BAGMATI RIVER	SAMPKHEL																									,	,	P					
570		LUKEKHANI	,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	N	N	N	N	N	,	N							
589	BAGMATI RIVER	PANDHERA DOBHAN																			N	N	N	N	N	,	,	,	,	,	N			
590		KARMAIYA-MANGALPUR			,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	N	N	N	N	N									
600.1	ARUN RIVER	UWA GAON													,	,	,	,	,	,	,	N	,	,	,	,	P	P						
690	TAMUR RIVER	MULGHAT				,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	,	P	P	N	P	,	N	P	P				
695	SAPTA	KOSHI																		,	P	,	,	,	,	,	P	,	P	,	,	,	N	
795	KANKAI MAI	MAINACHULI									N	N	,	,	P	P	P	P	P	P	P	P	P	P	P	P	,	N	N	,	P			
Number of Station		A							0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
		P							1	0	0	1	0	1	2	6	8	9	12	12	15	11	9	10	10	10	12	10	8	8	6	1	3	0

LEGEND
A : ALL DATA ENTERED
P : PART OF DATA ENTERED
N : NOT AVAILABLE
, : NOT ENTERED

SOURCE ; INVENTORY IN THE DATA BASE

Table 4.19 CONDITION OF SEDIMENT TRANSPORTATION DATA PROCESSING IN 1991 (22, SEP. 1991)

ST. ON.	NAME OF RIVER	NAME OF SITE	YEAR 60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
240	KARNALI RIVER	ASARA GHAT	,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	P	P	P	P	P	P						
260	SETI RIVER	BANGA NEAR BELGON			,	,	,	,	,	,	,	,	,	,	,	,	P	,	P	P	P	P												
280	KARNALI RIVER	CHISAPANI	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
286	SARDA KHOLA	SHYALPANI-SITA PALI												,	P	P	N	P																
350	RAPTI RIVER	BAGASOTI GAON															,	,	P	P	,	,	P	P	P	P	P							
360	RAPTI RIVER	SINDHANIA				,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P						
410	KALI GANDAKI	SETI BINI				,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	N	P	P	P	P	P	P	
430	SETI RIVER	SHISA GHAT				,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	P													
447	TRISULI	BETRAWATI							,	,	,	,	,	,	,	,	,	,	,	P	P	P												
450	NARAYANI	NARAYAN GHAT	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	P	P	P	P						
470	LOTHAR KHOLA				,	,	,	,	,	,	,	,	,	,	,	,	P	P	P	P	P	,	,	,	,	P	N							
550	BAGMATI RIVER	CHOVAR	,	,	,	,	P	A	,	,	,	P	P	P	P	P	P	P	P	P														
570		LUKEKHANI	,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	P															
600.1	ARUN RIVER	UWA GAON												,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P					
690	TAMUR RIVER	MULGHAT					,	,	,	,	,	,	,	,	,	,	,	,	,	,	P	P	,	P										
695	SAPTA	KOSHI																		,	,	,	,	,	,	,	,	,	,	,	,	,	,	N
795	KANKAI MAI	MAINACHULI												,	,	P	P	P	P	P	P	P	P	P	P	P								

Number of Station	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	P	0	0	0	1	0	0	0	0	1	1	5	7	7	9	11	12	10	5	7	7	7	6	7	3	1	1	1	1					

LEGEND

A : ALL DATA ENTERED
P : PART OF DATA ENTERED
N : NOT AVAILABLE
, : NOT ENTERED

SOURCE : INVENTORY IN THE DATA BASE

TABLE 6.1 ROLES OF SECTIONS AND UNITS

Sections or Units	General	Roles
1. The Study Team	Monitoring and Analysis	• Monitor the overall of the Model System • Training for the Model System • Analysis in the model basin
2. Negotiation Section	Negotiation	• Negotiate with outsiders for the System
3. Central Management Section	Management	• Instruct the staff • Training the staff • Manage the Data System • Connect with other sections and units • Investigate the condition of data processing and collection • Report the condition of data collection and processing to the Study Team • Keep the data • Supply the necessary materials to Regional Offices • Register and offer data
4. Data Checking Section	Data checking	• Collect data from Regional Offices • Check and correct data • Training about the observation and processing of data • Report the condition of data collection and processing to the Central Management Section
5. Data Entry Section	Historical data entry	• Entry of the historical data from 1990
6. Chief	Management at Regional Office	• Manage the Model System at Regional Office • Report the condition of data collection and processing to the Central Management Section
7. Processing Unit	Data processing	• Process data include quality checking • Report the condition of data collection and processing to the Chief • Train the observation staffs
8. Observation Unit	Observation	• Observation including the maintenance of the stations and training to observers • Collect data

TABLE 6.2 INSTRUMENTS FOR MODEL SYSTEM

Instrument	Quantity	Place
1. IBM PS/2 Model 80-121 With : Intel 80386 Processor, 2 MB Ram Memory, 20 MHz Speed, 1.44 MB 3.5" Floppy Disk Drive, 101 Enhanced Keyboard, 120 MB Hard Disk	1	Central Office
2. IBM 8512 14" Color Monitor (640 x 480, 0.41 mm)	1	Central Office and Western Regional Office
3. 5.25" External Disk Drive	2	Central Office
4. IBM 3363 Optical Disk Storage Unit With : Cable 3 m, Adapter	1	Central Office
5. TOSHIBA 53100SX With : Inlet 80386SX, 1 MB Ram Memory, 40 MB Hard Disk, 1.44 MB 3.5" Floppy Disk Drive, VGA Display System One Battery Pack	6	Regional Offices
6. Epson LQ-1170 Dot Matrix Printer With : Cable & Cord	7	Central & Regional Offices
7. 10 Keys Key Board With : Cable	6	Regional Offices
8. UPS 220 volts, More than 300 Watts With : Cable	1	Central Office
9. Stabilizer 500 Watts	7	Central & Regional Offices
10. Spike Suppressor (Volt Guard 220 V 1 kVA)	7	Central & Regional Offices
11. 3.5" Floppy Disk 2DD Type	180	Central & Regional Offices
12. 5.25" Floppy Disk 2DD Type	10	Central & Western Regional Offices
13. Ink Ribbon Cartridge/EPSON #7754	70	Central & Western Regional Offices
14. Paper 9.5" x 11"	35,000 pages	Central & Western Regional Offices
15. Optical disk	3	Central Office