2.6.2.3 User's Guide for Computer-Aided Planning

1. INTRODUCTION

The PW4SP Data Management User's Guide explains the procedure of encoding data and generating tables and figures for the PW4SP. The Guide consists of the following sections.

- Section 2: hardware and software required to successfully run the PW4SP Data Management System
- Section 3: the concept of the microcomputer architecture and an overview of hardware configurations
- Section 4: fundamentals to operate the system with internal architecture
- Section 5: basic concept of sofware operation
- Section 6: a complete list of data files and worksheets in the PW4SP Data Management System
- Section 7: data linkages
- Section 8: the procedure of updating the PW4SP
- Section 9: standard report format

2. SYSTEM REQUIREMENTS

The following are the basic requirement to successfully run the PW4SP data management.

Hardware:

Computer:	80486 CPU at 66 MHz.
RAM:	8 MB (minimum)
Hard Disk:	200 MB (minimum)
Floppy Drive:	3.5 inch, High Density
	5.25 inch, High Density
Monitor:	VGA Monitor
Printer:	80 column
	(Can handle A4 size paper).
Mouse:	Any brand which supported
	by MS-Windows
Miscellaneous:	500 watts Automatic Voltage
	Regulator and Surge Protector

Software:

Operating System:	DOS Ver. 6.22
Windows Environment:	MS-Window Ver 3.11
Spreadsheet:	MS-Excel Ver 5.0
Word Processing:	MS-Word Ver 6.0

3.   MICROCOMPUTER SYSTEM

All computers, whether large or small, basically operate on the same fundamental principles. The hardware and software of a mainframe computer and a microcomputer have the same components and fulfill the basic functions necessary to any computer system.

The computer is seen as a powerful tool that can enable us to expand the horizons of our knowledge. It allows processing of large volume of data or complex pattern of information that would otherwise be difficult to organize and understand. Moreover, it allows for an easily manipulation of data.

There are two major components of a microcomputer: the hardware and the software. These two components complement each other in order to fulfill their basic function.
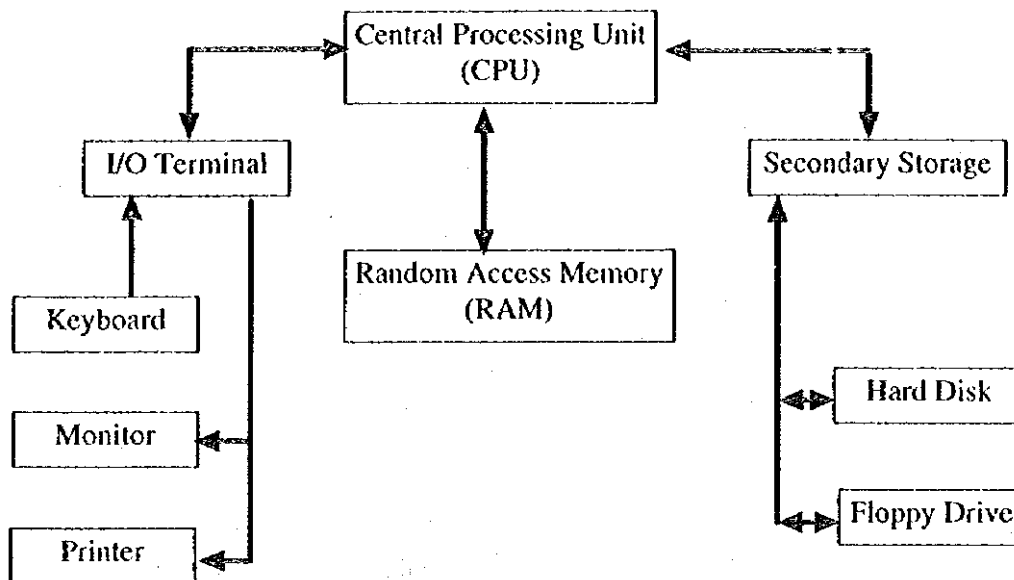
A microcomputer hardware is made up of several components based on the functions they perform in the system and how they interact with the other components.

The principal elements of a computer system are:

- Central Processing Unit (CPU)
- Main Memory (RAM)
- Secondary Storage Devices (disk, drives, magnetic tapes, etc.)
- Input/Output Devices (terminals, printers, etc.)

The CPU does the actual computing. It is capable of simple arithmetic and logical operations, such as addition and data comparison, that are executed at exceedingly high speed. The power of a computer directly stems from the speed and accuracy with which the CPU can carry out computations and move information around. The main memory of the computer is usually referred to as *Random Access Memory* or RAM. This part of the computer contains the programs and information that are currently being processed by the CPU. Secondary storage devices, such as magnetic disk, is capable of holding large amount of data. Programs and data are normally stored on these secondary devices and could be retrieved when needed. They are then loaded into the RAM and executed. The results of the processing can then be written into the secondary storage device or sent to an output device such as the monitor or printer. Peripheral devices or Input/Output (I/O) devices allow the user to put data into a computer or receive output from a computer. A terminal is a peripheral that contains both a keyboard for input and a monitor for output. Other peripherals include printers and plotters.

The diagram below presents the basic hardware component of a microcomputer system.

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                    ┌──────────────────────┐
         ┌─────────▶│ Central Processing Unit│◀─────────┐
         │          │        (CPU)          │           │
         │          └──────────┬───────────┘           │
         │                     │▲                       │
         ▼                     ▼│                        ▼
  ┌────────────┐        ┌──────────────────┐      ┌──────────────────┐
  │ I/O Terminal│        │Random Access Memory│      │ Secondary Storage │
  └──────┬─────┘        │      (RAM)        │      └─────────▲────────┘
        ▲│              └──────────────────┘                │
  ┌─────┴────┐                                      ┌────────┴───────┐
  │ Keyboard │                                      │◀▶│ Hard Disk  │
  └──────────┘                                      └────────────────┘
  ┌──────────┐                                      ┌────────────────┐
  │ Monitor  │◀                                     │◀▶│ Floppy Drive│
  └──────────┘                                      └────────────────┘
  ┌──────────┐
  │ Printer  │◀
  └──────────┘
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Floppy Drive is the most common type secondary storage used in personal computer today. It acts as an external drive from which the users insert the floppy disk to store and retrieve information. The floppy disk comes in three sizes: 3.5 inches, 5.25 inches and 8 inches. It is characterized by thin circular plastic sheets coated with iron oxide so that magnetic patterns recorded on it can be retained. The surface is similar to a magnetic tape used to record music. The disk is contained in a square cardboard envelope in which it spins. The 3.5 inches diskette is contained in a hard plastic case with a metal shutter that protects the magnetic media. A floppy disk can store from 80 kilobytes to 1.44 megabytes of data. Floppy disk system is slower and has less storage capacity than hard disk system, but its lower cost makes it a popular choice for personal computer.

Hard disk is made of magnetic metal, and can either be removable or non-removable. The most common type of hard disk found in personal computer today is non-removable. This disk typically holds from 10 megabytes to 1.5 gigabytes of information. Each megabyte is equivalent to 1,048,576 characters of information, or roughly 1,800 single-spaced typewritten pages; hence, this is a very efficient way to store large volume of information.

Keyboard is an external device that acts as a primary interface between the human operator and the computer. The keyboard has 3 basic components: the typewriter keyboard which is composed of alphabet characters; the calculator pad which is composed of numeric characters; and the function keys which serve as special macro key for various softwares.

Monitor is the screen or video display peripheral and serves as the main output device on a personal computer. It is used to display text and graphics information and is available in a variety of sizes and types. Monitors can be divided into two broad groups: those designed to display text information; and those designed to display graphics information, such as charts or picture. Within the graphics group, there are color or monochrome (single color) displays. A high quality graphic color monitor is capable of showing high resolution pattern and is recommended for application in MS-Window, Excel, or AutoCAD.

Printer is another common peripheral found in personal computer system. The 2 common type of printers are dot matrix and laser printer. The dot matrix printer produces its image by printing a group of dots that forms the image of a character or symbol. Several methods are used to create the pattern of dots. The most common are impact, thermal, and ink-jet technologies. The laser printer produces its image by means of electrophotograph similar to the principle of photocopy machine.

4.   OPERATING SYSTEM

An operating system is a set of control program that manages the computer's resources and create a well-defined software environment for computer applications. Computer hardware by itself can perform little useful work. A computer requires a software to be able to communicate and do useful work. The first layer of software in a computer system is the operating system. This is *what starts*, or *boots up*, the machine helps in pulling itself up by its own bootstraps and establishes a predetermined set of conditions so that applications can be run. When the computer is turned-on or the reset button is pressed, the control is pass to a set of control programs found in the ROM, a firmware store in computer chips. These programs perform several tasks: (1) to check if hardwares are functioning correctly; (2) to load a set of control program from the disk to the memory; and (3) to pass control to a routine which will accept the user input. At this point, the operating system is loaded and the user can execute an application program such as MS-Windows, MS-Word, or Excel.

An operating system by itself has two levels of functionality. The first level is seen by the user running the applications and utilizing system commands and utilities. At this level, each operating system has its own set of command used to accomplish frequently performed tasks such as copying files, renaming files, and formatting disks. Normally, frequently-used functions are included in the operating system as system commands. The second is at the programming level. All operating systems contain a set of pre-packaged routine which performs the "primitive" functions necessary in almost all applications. Such functions, like

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sending a character to the screen, reading and writing information from a disk file, and accepting input from the keyboard are common to nearly all programs. This level of functionality gives the programmer a set of standardized routines to perform this task.

Operating systems, such as DOS or UNIX contain many useful utilities and provide a rich set of function, which simplify the programmer's job writing application and controlling the hardwares.

5. SOFTWARE

The operating system alone renders the computer nearly useless, unless the user is capable of directly communicating to the hardware. In order to use the computer system, a software. is needed. Various softwares are available for different purposes, such as MS-Word for word processing, Excel for spreadsheet and Foxpro for programming.

5.1. MS-WINDOWS

MS-Windows is a popular software that duplicates the function performed by DOS at the system level. Most of the commands are represented by descriptive figures called *icons*. Navigating around the windows is through a pointing device called mouse. To execute a command, the user only need to bring the mouse pointer to the desired command described by the icon and press the right button. The execution starts without typing any single character in the keyboard, unlike the DOS convention that needs typing a series of characters comprising the filename. In windows, the computer screen is referred to as the *desktop*. When working, the application and documents must be in the windows. The windows on the desktop must also be arranged. If an application is left for a while, the windows are shrunk to an application icon, and still, the application keeps running on the background. When an application is shrunk, the windows place their application icon at the bottom edge of the desktop until it is again restored to window size.

With windows, several powerful applications can be run simultaneously. For example, switching from a word processing application to a spreadsheet, and then to database application with a few simple moves while quitting one application and restarting another, can easily be done.

Two Kinds of Windows

Application windows contain running applications. The name of the application, the associated document, and the application's menu bar appear at the top of the application window. Application windows can be positioned anywhere within the desktop borders.

Document windows appear only with application that can open two or more documents at one time inside the same workspace. For example, with Windows File Manager, one can open a number of directories at the same time. Each directory appears in a separate document window (called a directory window) in the File Manager workspace.

Parts of a Windows

Each application and some documents the user choose to work on, open as separate windows. Every window has some common elements, however, not all windows use all the items.

The elements as illustrated below are the tools for working with the window and the application or document within the window.
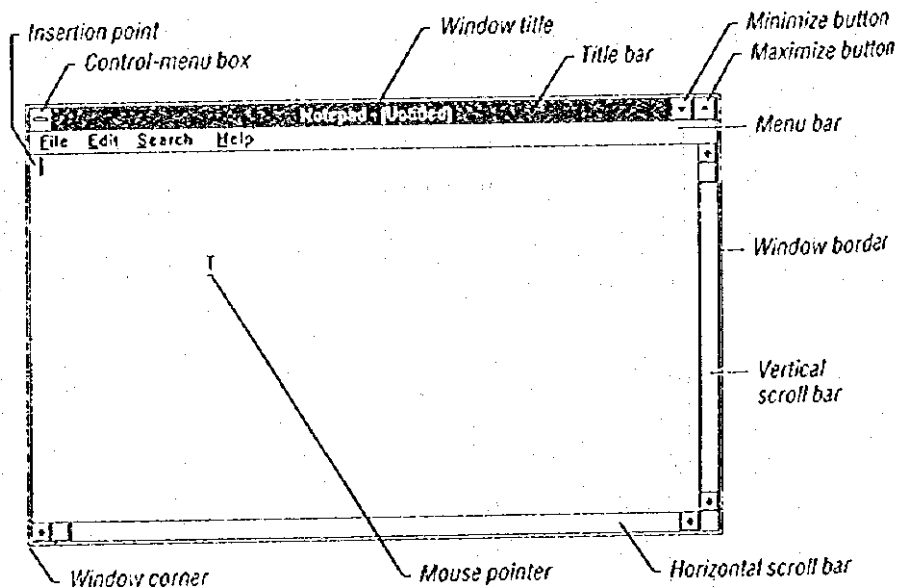
The *Control-menu* box located in the upper-left corner of the window is the most useful menu when the use of a keyboard is preferred. The Control-menu commands can resize, move, maximize, minimize and close windows, and switch to Task List.

The *title bar* shows the name of the application or document. If more than one window is open, the title bar of the active window has a different color or intensity compared to the other title bars.

The *window title*, depending on the type of window it appears, can be the name of an application and the name of the document, or a placeholder. In such case, "untitled" normally appears.

The *menu bar* lists the available menus. Most applications have a File menu, an Edit menu, and a Help menu as well as other menus unique to the application.

The *Scroll bar* can move the parts of the document into view when the entire document will not fit in the window. With the bar, unseen portion of the lists and other information that is too long to fit in the allotted space can also be viewed.

The *Maximize and Minimize buttons* enlarge the active application window to fill the entire desktop or shrink the window to an icon. Document windows enlarge just to fill the application workspace and not the entire desktop. After enlarging the window, the Maximize button changes to a Restore button. Restore button can be used to return the window to its previous size.

The *Window border* is the outside edge of a window. It can lengthen or shorten each side of the border.

The *Window corner* can be used to shorten or lengthen two sides of a border at the same time.

The *Workspace* is where most of the work with an application are done. For example, the content of the documents appears in the workspace when starting a wordprocessor. Hence, an application can allow the opening of more than one document window within this workspace.

The *selection cursor* shows where the user is in an individual document. It marks the place in the text or graphics where the user begins typing or drawing. The arrow-shape mouse pointer appears if you have a mouse installed. It is used to indicate items the user wants to select with mouse.

Starting Windows

At the DOS prompt, type *win* and press ENTER.

When starting windows, the Program Manager window is automatically opened with the Main Group window opening inside it and other window groups represented as group icons located at the lower edge of the Program Manager window as show in the illustration in below.
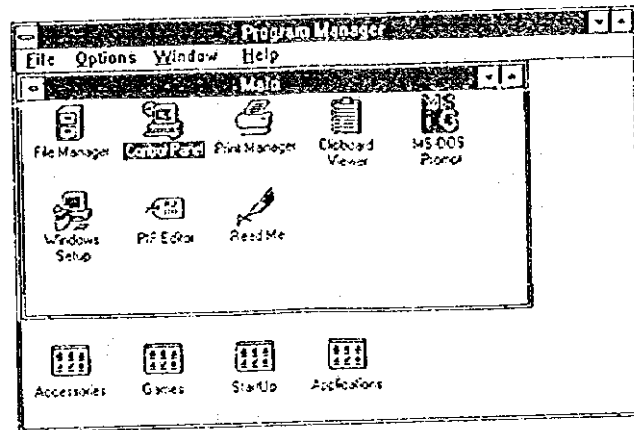
Quitting Windows

Mouse

1. Quit any application that are currently running.
2. Click Program Manager's File menu to open it.
3. Click *Exit Windows*.
   The *Exit Windows* confirmation dialog box appears.
4. Click *OK* to exit windows.

Keyboard

1. Quit any application that are currently running.
   Press ALT-F to open Program Manager's File Menu.
2. Press X (the underlined letter in Exit).
   Or use arrow key to move the highlight to *Exit Window*
   and the press ENTER.
3. The *Exit Windows* confirmation dialog box appears.
4. Press ENTER to choose OK and exit windows.

Starting Window Application

To make starting application easy, Window offers three methods:

Choose a program item from a group window in Program Manager.

Choose a program file from the appropriate directory window in File Manager.

Choose the Run command from the File menu in Program Manager or File Manager.

Starting Applications from Program Manager

As long as an application belongs to a group, the easiest way to start is to choose from the group window. If a document is included with the application, it will be loaded into the application workspace.

Mouse   1. Open the Program Manager window, if not already open, and open the group window that contain the application you want to start.
               2. Double-click the icon for the application.

Keyboard   1. Open the Program Manager window, if not already open, and open the group window that contain the application you want to start.
               2. Use the arrow keys to move the highlight to the icon for application.
               3. Choose Open from the File menu and press ENTER.

Starting Applications from File Manager

You start an application from File Manager by opening the program file from a directory window. You can execute an application program file having .COM, .EXE, .PIF, or .BAT filename extension. If the application can run in a window environment, the window will appear in front of any File Manager windows that are open.

Mouse   1. Start File Manager and open the directory window that contain the program file.
               2. Double-click the filename.

Keyboard   1. Start File Manager and open the directory window that contain the program file.
               2. Use the arrow keys to move the highlight to the icon for application.
               3. Choose Open from the File menu and press ENTER.

Starting Applications with the Run Command

The Run command is a handy way to start applications that you want to run only occasionally or have not yet added to a group. You can open a document at the same time you start the application. Unless the program file is in your current path, you need to know the exact directory location and name of the program file before you can start the application.

1. Choose Run from the File menu in Program Manager or File Manager.

The Run dialog box appears.

2. Type the pathname and the exact filename of the program file, including the extension if there is one.
3. If you want the application to shrink to an icon as soon as it starts, make sure the Run Minimized check box contain an X.
4. Choose OK or press ENTER.

5.2. MS-EXCEL

Excel is a spreadsheet type of software package that operates under the MS-WINDOWS operating system. The primary document in Excel is called a *workbook*. The workbook is similar to a ledger that stores information and each workbook is made up of *sheets*. The sheet is virtually divided into *column* and *row*; the column run horizontally and denoted by an alphabet starting with *A* and the row run vertically and denoted by number starting from 1. The intersection of column and row is called *cell*. The cell is the basic component of worksheet that accept different data types. The most common data types are character, number, date, logical value and formula.
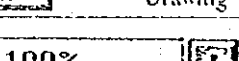
Standard Toolbar

The standard toolbar that normally appears at the top of screen helps select options. Such options can open workbook, print and save worksheet, and ask for help. The following is a list of the individual icons and their respective functions.

Excel's Standard Toolbar

Button	Name	Function
	New Workbook	Creates a new workbook
	Open	Opens a document
	Save	Saves the active workbook
	Print	Prints the active workbook
	Print Preview	Shows the active document in print preview mode

Excel's Standard Toolbar

Button	Name	Function
	Speller	Checks the spelling of the document
	Cut	Cuts the selection to the Clipboard
	Copy	Copies the selection to the Clipboard
	Paste	Places the Clipboard contents at the insertion point
	Format Painter	Copies and pastes formats for cells and objects
	Undo	Undoes the last action or command
	Repeat	Repeats the last action or command; this is the same as the redo feature in Word 6
	AutoSum	Inserts the SUM function and shows sum range
	Function Wizard	Starts the Function Wizard
	Sort Ascending	Sorts selected rows in ascending order
	Sort Descending	Sorts selected rows in descending order
	ChartWizard	Activates the ChartWizard
	Text Box	Inserts text or text box
	Drawing	Turns the drawing toolbar on or off
100%	Zoom Control	Sets the view of the document
	Tip Wizard	Turns the TipWizard toolbar on or off
	Help	Displays Help

Excel's Formatting Toolbar

Button	Name	Function
Arial	Font	Sets the font for the selection
10	Font Size	Sets the font size for the selection
B	Bold	Boldfaces the selection
I	Italic	Italicizes the selection
U	Underline	Underlines the selection
	Align Left	Left-aligns the selection
	Center	Centers the selection
	Align Right	Right-aligns the selection
	Center Across Columns	Centers the selection across columns
	Currency Style	Changes the selected cells to default currency style
	Percent Style	Changes the selected cells to default percent style
	Comma Style	Changes the selected cells to default comma style
	Increase Decimal	Adds one decimal place to the number format
	Decrease Decimal	Removes one decimal place from the number format
	Borders	Enables you to select a border for the selection
	Color	Sets the color for the selection
	Font Color	Sets the color for the selected font

Basic Part of Excel Screen
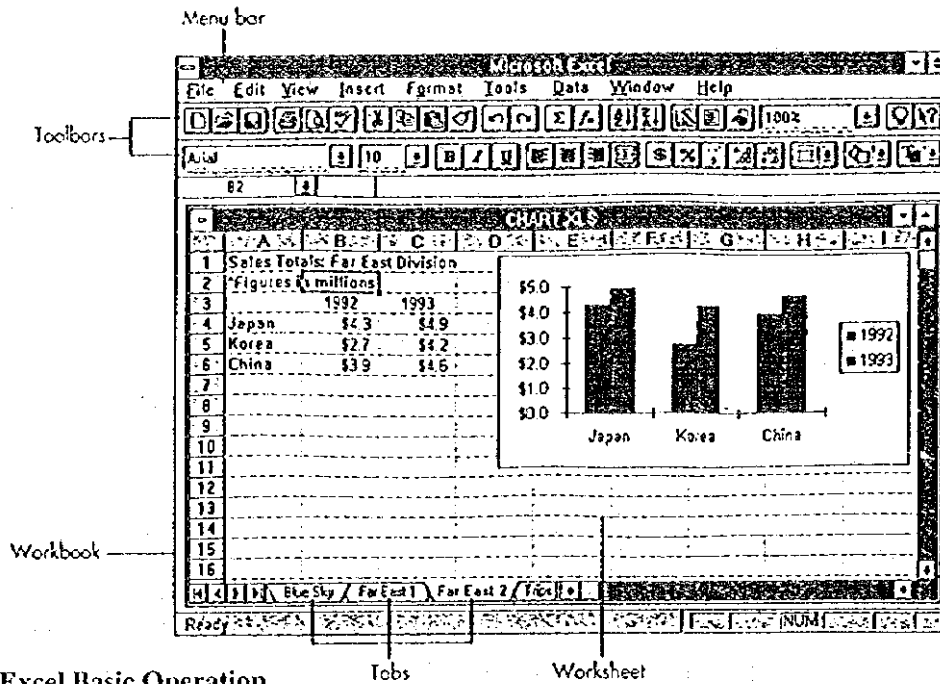
MS-Excel Basic Operation

Following the description of the basic operation, the mouse is used as a pointing device instead of a keyboard. The word *click* means the user must press the left button of the mouse; double click means two successive clicks; and *enter* means the user must press the Enter key in the keyboard. Basic operation dealt only to the routine necessary to update the PW4SP data base.

Creating a New Worksheet

When you enter Excel, it opens up to a new workbook, by default it contain 16 worksheets. You can use any of the worksheets. Even if there is an open workbook, you can still open another by moving the mouse pointer in the New icon (upper left of the screen below the menu bar). Click on it.

Saving the Workbook

　　1. Move mouse pointer to File menu and click on it to bring the File menu option.
　　2. From the option available. Select Save.
　　3. If the document your saving is new. The Save As dialog box appear. In the File Name box type the name of the workbook.

Enter Data in a Cell

　　1. First select the *cell* by moving the mouse pointer and clicking the
　　　　right button. This routine place the insertion point in the active cell,
　　　　which is highlighted on-screen with border around it.

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2. You can start entering the data from your keyboard or numeric keypad.
3. To confirm the input, you can press ENTER or move the mouse pointer
   to the Formula bar and click the Check icon.

Editing Cell Contents

1. Double-click the cell containing the data you want to edit.
   To edit in the formula bar, click in the formula bar. In case the formula
   bar is not displayed, choose Formula Bar from the View menu located
   at the top row of screen.
2. Edit the cell contents.
3. To confirm the modification made in the cell, click the Check icon in the
   formula bar or press ENTER. To cancel edits, click the X icon in the
   formula bar or press ESC.

Clearing Cells

1. Select a cell or range of cells that you want to clear.
2. From the Edit menu, choose Clear, and from the option available,
   you the choose All, Contents, Formats, or Notes.
   Shortcut: Press DEL.

To clear cells by dragging

1. Select a cell or range of cells that you want to clear.
2. Move the mouse pointer in the *fill handle* (lower right corner),
   drag the fill handle toward the area of cell or range, then the selected
   area will become gray.
3. Release the mouse button.

Copying Cells

1. Select the cells containing the data you want to copy.
2. From the Edit menu, choose Copy.
3. Select the upper-left cell of the paste area.
   Beware that any values or formula in the paste area will be replaced.

Undo Command

1. To undo your last command, click the Undo button.
   From the Edit menu, choose Undo.

Creating Border around Cell

1. Choose the Cell menu from Format menu.
2. Choose the side you want put the border, and then choose type of border.
3. Click OK button.

Deleting Rows and Columns

1. Select the row or column
   To delete more than one row or column, extend the selection to include
   all the rows or columns you want to delete.

2. From the Edit menu, choose delete (Entire rows or column)
3. Click OK button

Inserting Rows and Columns

1. Select the row or column
   To insert more than one row or column, extend the selection to include
   the number of rows or columns you want to insert.
2. From the Edit menu, choose Insert (Entire rows or column)
3. Click OK button.

Selecting a Sheet or Sheets

To select a single sheet, click the sheet tab.

To select two or more sheets

1. Click the sheet tab for the first sheet you want to select.
2. If the sheets you want to select are adjacent, hold down the SHIFT key
   and click the tab for the last sheet.
   If the sheets you want to select are non-adjacent, hold down the CTRL key
   and click the other sheet tabs.

Ungroup Selected Sheets

1. Move the mouse pointer to the sheet tab. Click the left button of the mouse.
2. While the mouse pointer still on the sheet tab, click the right button and
   choose the Ungroup Sheets.

Inserting Worksheet

1. Select a sheet or sheets in the workbook.
2. From the Insert menu, choose Worksheet.
   The new sheet or sheets will be inserted to the left of the sheet tab you select.
   Shortcut: SHIFT+F11

Deleting Worksheet

1. Select a sheet or sheets in the workbook.
2. Move the mouse pointer to the sheet tab, and click the right button.
3. Choose Delete, and click the OK button.

Moving Worksheet Within the Workbook

1. Select the sheet or sheets you want to move.
2. Drag the selected sheet tab along the row of tabs.
   A black triangle indicates the place where the sheets will be inserted.
   All selected sheets will be inserted.
3. Release the mouse button.

Alternate Method

1. Select the sheet or sheets you want to move.
2. From the Edit menu, choose Move or Copy Sheet.
3. In the Before Sheet box, select where you want sheets to be inserted.
4. Click the OK button.

Moving Sheets to Other Workbook

1. Open the workbooks you want to move sheets *to* and *from*.
2. Select the sheet or sheets you want to move.
3. From the Edit menu, choose Move or Copy Sheet.
4. In the To Book box, select the destination workbook.
5. In the Before Sheet box, select where you want the sheet or sheets inserted.
6. Click OK button.

Alternative Method

1. Open the workbooks you want to move sheets *to* and *from*.
2. From Window menu, choose Arrange and choose horizontal.
   In the desktop, two workbooks will open in screen split the workarea horizontally.
3. Select the sheet or sheets you want to move.
4. Hold-down the CTRL key and the right button of the mouse.
   A paper icon and black triangle indicate that you made the move routine active.
5. Drag the mouse pointer to the other workbook and select where you want
   the sheet or sheets inserted.
6. Release the mouse button.

Copying sheets within a workbook

1. Select the sheet or sheets you want to copy.
2. Hold down the CTRL key and mouse left button, and then drag the selected
   sheet tab along the row of tabs. A black triangle indicates the place where
   the copied sheet will be inserted.
3. Release the mouse button and then the key.

Alternative Method

1. Select the sheet or sheets you want to copy.
2. From the edit menu, choose Move or Copy Sheet.
3. In the Before Sheet box, select where you want the copied sheet inserted.
4. Select the Create A Copy check box.
5. Click the OK button.

Copying sheets to other workbook

1. Open the workbook you want to copy to and from.
2. Select the sheet or sheets you want to copy.
3. From the Edit menu, choose Move Or Copy Sheet.
4. In the To Book box, select the destination workbook.
5. In the Before Sheet box, select where you want the copied sheet inserted.
6. Select the Create A Copy check box.
7. Choose the OK Button.

Printing your Work

1. From File menu, choose Page Setup to display the Page Setup dialog box.
2. On Page Setup dialog box, their are four option available
   Page tab controls page orientation, scaling, page size, print quality, and
      starting page number for the selected sheet.
   Margin tab controls page margins and the header and footer margins, and
      center the sheet on the page vertically, horizontally or both.
   Header/Footer tab controls page the headers and footers for the selected sheet.
      headers and footers are descriptive text that print at the top and bottom of
      every page in your sheet. You can add, delete, edit, format, and position
      headers and footers, and view them as they will print.
   Sheet tab specifies which areas of the sheet you want to print, and controls
      the print titles, page order, and draft quality. Also controls whether
      gridlines, cell notes, and row and column heading print. The Sheet tab is
      displayed if the active sheet is a worksheet or macro sheet.
3. On the Print What, their are three option available.
   Selection option prints only the selected cells in the selected sheets.
      Nonadjacent selections are printed on separate pages. Selecting this
      overrides any print areas you have defined for the selected sheets using
      Print Area option on the Sheet tab of the Page Setup dialog box.
   Selected Sheets option prints the area of each of the currently selected sheets,
      with each print area starting on a different page. If no print area is defined
      on a separate sheet, the entire sheet is printed.
   Entire Workbook option prints the entire print area of all sheets in the active
      workbook. If a sheet does not have a print area, that entire sheet is printed.
4. On the Copies box, specifies the number of copies to print.
5. On the Page Range, their are two option available.
   All option print all the pages in the selected sheets.
   Page(s) option print the range of pages specified in the From and To boxes.
      Page numbers you selected in the From and To boxes affect which cells
      will be printed, not the numbering of the pages upon which they are
      printed. To change the numbering of printed pages, specify a number in
      the First Page Number box of the Page tab in the Page Setup dialog box.
6. The user have option to see the appearance of the print by clicking the
   Print Preview button.
7. Printer Setup option give the user an option to select among the available
   printer drivers.
8. Click the *OK* button to proceed printing.

5.3. MS-WORD

MS-Word is word processing type of software. This is analogous of converting your computer into typewriter machine. You have page in which you type characters, you have a ruler that show where you are as you type across the page. You have tabs stops and margin settings. The insertion point moving across the page even acts like the print head moving across the page.

MS-Word offer more advance features that you need to create from simple to complex type of document. When you start Word you will notice almost the identical appearance with that of MS-Excel. Most of the command are represented in terms of icon, in the middle of the workspace were you enter your text and other object included in your documents.

Starting Word

From the MS-Window environment, you can double-click the MS-Word icon in the MS-Office program group. In some case the MS-Office administrator is automatically loaded at start-up of Windows environment. The MS-Office administrator menu icons are located in the upper right side of the screen. You can start MS-Word by clicking the icon.

Quiting Word

1. Move mouse pointer to File menu and click. File sub-menu will appear.
2. From the File sub-menu, move mouse pointer to Exit option and click.
   The MS-Word environment will normally terminate. In some cases, if some active documents has not yet been save. MS-Word give the user's option to save the documents.

Standard Toolbar

The standard toolbar which normally shown at the top of screen helps you select the option, from this toolbar. The user's can open new document, open existing document, print and save document, and ask help to farther understand some function or procedure to accomplish desired task. Using the toolbar speed-up the desire task instead of using the menu (located at the top of the screen). The following shows the list of standard toolbar icons and their function.

Standard Toobar Icons

Icon	Nome	Description
	New	Creates a new file based on the Normal template
	Open	Displays the Open dialog box so that you can select an existing file to open
	Save	Saves the current document
	Print	Prints the current document
	Print Preview	Activates Word's print preview features
	Spelling	Initiates a spelling check

Standard Toobar Icons

Icon	Name	Description
	Cut	Cuts selected material to the Windows Clipboard
	Copy	Copies selected material to the Clipboard
	Paste	Pastes material from the Clipboard into your document
	Format Painter	Copies the formatting of a selection to the text you specify
	Undo	Undoes the commands you select from the list presented
	Redo	Redoes the commands you select from the list presented
	AutoFormat	Formats your document automatically
	Insert AutoText	Inserts an AutoText entry
	Insert Table	Inserts a table into your document
	Insert Excel Worksheet	Inserts an Excel worksheet into your document
	Columns	Formats your document using columns
	Drawing	Opens the drawing application and enables you to draw a picture in your document
	Insert Chart	Inserts a chart into your document
	Zoom Control	Scales your view of the document by the percentage you select
	Help	Activates context-sensitive help

MS-Word Basic Operation

Opening and Existing Document

1. Click the Open Folder icon (normally second from the left) to bring up the open dialog box.
2. In the Open Dialog box, select the file you to open from File Name combination box.
3. Click the OK button.

Changing the Format of the Text

1. Click the arrow button to the right of the *font* box to bring the list of available font.
2. Scroll through the list box by clicking on the scroll bar, and select a font by clicking on it.
3. Begin typing. The text will appear in the font you just selected.

Changing the Font Size

1. Click the arrow button to the right of the *font size* box to bring the list of available size.
2. Scroll through the list box by clicking on the scroll bar, and select a size by clicking on it.
3. Begin type. The text will appear in the font size you size selected.

Choose a Style

Perform any of the following procedures to change a font style:
- Click on the button labeled B to set the *bold* feature on.
  You also can press Ctrl+B from the keyboard.
- Click on the button labeled I to set the *italic* feature on.
  You also can press Ctrl+I from the keyboard.
- Click on the button labeled U to set the *underlined* feature on.
  You also can press Ctrl+U from the keyboard.
- Click on the button labeled B and I to set both *bold and italic* features
  You also can press Ctrl+B followed by Ctrl+I from the keyboard.

Setting Special Effects

You can use a variety of special text effects:
- Strikethrough
- Superscript
- Subscript
- Hidden
- Small caps
- All caps

To set any of these features, use the following procedure:

1. Open the Format menu and select the Font item.
2. If the Fonts tab is not on top, click on it.
3. In the *Effect* group box, select the check box that represent the special effect you want to turn on.
4. Click the OK button.
5. Begin typing. Your text appears with the special effect you selected.

Setting the Indentation

1. Open the Format menu and select the Paragraph item.
2. If the Indents and spacing tab is not on top. click on it.
3. In the indentation group box, use the Left and Right spin boxes to set the indentation from the left and right margins. Click on the arrow buttons until the measurement is correct, or select the text in the body by highlighting it with the mouse and then type exact measurement you want.
4. To set first line or hanging indentation, open the Special drop-down list box by clicking on its arrow, and select the appropriate item. Use the By spin box to set the measurement for the first line indentation or the hanging indentation.
5. Click the OK button. Your current paragraph takes on the indentation you just set. Each subsequent paragraph you create takes on this pattern. unless you reset the indentation using the dialog box.

Setting Line Spacing

1. Open the **Format** menu and select the **Paragraph** item.
2. If the **Indents** and Spacing tab is not on top, click on it.
3. In the Spacing group box, use the **Before** and **After** spin boxes to set the distance in points from the previous paragraph and from the following paragraph. Click on the arrow buttons until the measurement is correct, or select the text in the box by highlighting it with the mouse and then type the exact measurement you want.
4. To set line spacing within the paragraph, open the **Line** Spacing drop-down list box by clicking on its arrow, and select the appropriate item. Then use the **At** spin box to set the measurement for number of lines or distance between lines, whichever is active.
5. Click the **OK** button. Your current paragraph takes on the line spacing you just set. Each subsequent paragraph you create takes on this pattern, unless you reset the line spacing using the dialog box.

Copying and Inserting Text

1. Highlight the text by dragging the mouse pointer over the text to be selected.
2. Move pointer to Copy icon and click on it.
3. Move mouse pointer to the place were you would like the insertion take place.
4. Move mouse pointer to Paste icon and click on it. Alternatively, you can press the right button of the mouse to bring the menu option., select the paste by click on it.

Undoing and Redoing

If you do make a mistake, you can undo it by selecting the **Undo** option from the **Edit** menu. This procedure undoes the last change you made to the document. Word always will add the name of the operation you are about to undo as the second word of the Undo menu item. If you cannot undo anything, this option change to Can't Undo and is dimmed.

Overstriking Text

There are times, however, when you want to type over existing text. To switch to this editing mode, press the **Insert** key in the keyboard. When you type, the characters you type replace any characters to the left of the insertion point. To turn off the overstrike mode, press the Insert key again.

Deleting Text

Use mouse pointer to highlight the desire text and press the **Del** key from the keyboard.

Insert File

1. Move mouse pointer in the location were you would like the insertion take place.
2. From the **Insert** menu, select **File** option.
3. From the **File** name combination box, select the file you would like to insert. Click the **OK** button.

Creating the Header or Footer

1. From the View menu, choose Header and Footer.
2. The Header and Footer toolbar appear, click the switch between Header and Footer button. The header and footer areas are enclosed by a nonprinting dashed line.
3. Do one or more of the following;
     Text - You can type the text within the dashed line that surround the header or footer area.
     Page Number - Click the icon.
     Current Date - Click the icon.
     Current Time - Click the icon.
4. To return to the document, choose the Close button on the Header and Footer toolbar, or double-click the main text area

Previewing the Document

1. From the File menu, choose Print Preview.
     While in the print preview mode, you can perform the following options.
     a) You can print the document by click the Print button.
     b) You can switch the magnifier on and off by clicking on the magnifier button.
     c) You can switch to a one page view by clicking the One Page button.
     d) You can switch to view multiple pages by clicking on the Multiple Pages Button and dragging across the grid that appears, releasing the mouse button when you have the multiple-page view you want to use.
     e) You can zoom in or out on your document by adjusting the zoom percentage in the Zoom Control drop-down list box.
     f) You can switch the view of the ruler on and off by clicking on the View Ruler button.
     g) You can squeeze a small amount of text on the final page into the the outer pages by clicking on the Shrink to Fit button.
     h) You can expand the preview screen to show only the page, the toolbar, and the status bar clicking on the Full Screen button.
     I) You can exit the preview mode by clicking on the Close button.

Printing your Document

1. From the File menu, choose Print option.
   A Print dialog box appear.
2. In the Print *What* drop-down list box. This option enables you to print the document or several items ancillary to the document, such as Summary Info, Annotation, Style, Autotext Entries, and Key Assignments.
3. Use the *Copies* box to enter the number of copies to print.
4. Use the *Page Range* option to determine how much of the document to print. You can print All the document, the *Current Page*, or selected *Pages*.
5. Check the *Collate Copies* check box to finish the first set of copy before printing the second copy.
6. When all it set correctly, close all the dialog boxes you have open, and click OK button, the printing process begin.

6. PW4SP DATA FILES

Data files are collection of information revelant to the preparation of PW4SP. Data files are logically group into three major areas of information. The first group of information are the base data that are composed of information derived from survey, ocular inspection, and existing information from the provincial and national agencies. The second group of information are the key parameter data that are composed of information derived from applicable policies, assumption, water test result, and current cost of commodity. The third group of information are the presentation of data which derived from the previously mentioned groups of information's, this data are processed and then logically arranged to show provincial profile, existing facilities and service coverage, past financial performance, future requirement of the relevant sector, cost estimates for future sector development, and financial arrangement.

6.1. Base Information

1. *Socio-economic Data* (socio.xls)

   a) Administrative Composition ((M) Administrative Composition)
   b) Past Population ((M) Past Population Page 1 to 2)
   c) Projected Population ((M) Projected Population)
   d) Household ((M) Household)
   e) Services ((M) Services)
   f) Occupation ((M) Occupation)
   g) Family Income, Education and Literacy ((M) Family Income and Education)

2. *Land Use Data* (landuse.xls)

   a) Existing Land Use ((M) Existing Land Use)
   b) Future Land Use ((M) Future Land Use)

3. *Health Data* (health.xls)

   a) Morbidity, Mortality and Infant Mortality ((M) Morbidity and Mortality)
   b) Facility and Practitioner ((M) FacilityPractitioner)

4. *Water Resource Data* (h2ores.xls)

   a) General Information ((M) General Information)
   b) Water Source Information ((M) Source Information)

5. *Water Supply Systems Data* (h2osupp.xls)

   a) Level III Systems ((S) Level III P1-2 .. P2-2)
   b) Level II Systems ((S) Level II P1-4 .. P4-4)

6. *Environmental Sanitation Data* (sanit.xls)

    a) Household Toilets ((M) Household Toilets)
    b) School and Public Toilets ((M) Sch. and Pub. Toilets)
    c) Drainage Facility ((M) Drainage Facility)
    d) Solid Waste Collection and Disposal ((M) Solid Waste)

7. *Investment Data* (invest.xls)

    a) Previous Annual Investment ((P) Fin. Past Ann. Invest.)
    b) Planned Annual Investment ((P) Fin. Future Ann. Invest.)

6.2. Key Parameter

1. *Key Parameters* (keypar.xls)

    a) Key Parameter (Key Parameter)
    b) Level I - Safe and Unsafe (Level I Safe and Unsafe)
    c) Well Source Composition (Well Source Composition)
    d) Unit Cost (Unit Cost)
    e) Scoring Factor (Scoring Factor)
    f) Annual Investment (Annual Investment)

6.3. Data Presentation

1. *Provincial Profile* (chap-3.xls)

    a) Outline of City and Municipalities (MTable 3.1.1)
    b) Current Land Use (MTable 3.2.1)
    c) Drainage Areas and Flow Rates of Major Rivers (MTable 3.2.2)
    d) Distribution of Households by Income Class (MFigure 3.3.1)
    e) Population Distribution by Occupation (Figure 3.3.2)
    f) Population Distribution by Highest Attainment of Education (MFigure 3.3.3)
    g) Provincial Outline on Public Services (MTable 3.3.1)
    h) Public Facilities and Services by Municipality (MTable 3.3.2)
    i) Previous Population Development of the Province (MFigure 3.4.1)
    j) Previous Population Development by Municipality (MTable 3.4.1)
    k) Present Population Distribution (MFigure 3.4.2)
    l) Outline of Urban and Rural Areas in the Province (MTable 3.4.2)
    m) Household Numbers and Household Sizes (MTable 3.4.3)
    n) Number and Rates of Ten Leading Causes of Morbidity,
        Mortality and Infant Mortality (MTable 3.5.1)
    o) Reported Cases and Deaths of Notifiable Water Related Diseases (MTable 3.5.2)
    p) Municipal Solid Waste Collection and Disposal, and
        Service Coverage in 1994 (MTable 3.6.1)
    q) Number and Ratio of Population to Health Facilities
        and/or Medical Practitioners (STable 3.5.1)
    r) Types of Drainage Facilities (STable 3.6.1)
    s) DENR Water Quality Criteria/Water Usage and Classification
        for Fresh Water (STable 3.6.2)

2. *Existing Facilities and Service Coverage* (chap-4.xls)

    a) Information on Existing Level III Systems (MTable 4.1.2)
    b) Information on Water District (MTable 4.1.3)

c) Information on Existing Level II Systems (MTable 4.1.4)

d) Information on Existing Level I Facilities (MTable 4.1.5)

e) Water Supply Service Coverage by Municipality in 1994 (MTable 4.1.7)

f) Water Supply Service Coverage by Municipality (MFigure 4.1.1)

g) Sanitation Facilities and Service of Household Toilets, Urban and
   Rural, 1994 (MTable 4.2.1)

h) Provincial Service Coverage of Household Toilet Facilities, 1994 (MFigure 4.2.1)

i) School Toilet Facilities and Service Coverage in 1994 (MTable 4.2.2)

j) Public Toilet Facilities and Service Coverage in 1994 (MTable 4.2.3)

k) Details on Existing Level III Systems (STable 4.1.1 Sheet 1 to 4)

l) Details on Existing Level II System (STable 4.1.2 Sheet 1 to 6)

m) Number of Level I Facilities by Safe and Unsafe Classification (STable 4.1.4)

n) Estimation of Unserved Population by Municipality (STable 4.1.5)

o) Estimation of Population Covered by Safe and Unsafe Source
   by Municipality (STable 4.1.6 Sheet 1 to 2)

p) Sanitation Facilities and Service Coverage of Household Toilets
   by Type, by Municipality, Urban and Rural, 1994 (STable 4.2.1)

3) *Past Financial Performance in Water Supply and Sanitation* (chap-6.xls)

a) Previous Sector Investment to the Province by Concerned Agency (MTable 6.2.1)

b) Past Internal Allotment to the Province from Central Government (MTable 6.2.2)

c) Affordability in Water and Sanitation Services (MTable 6.4.1)

d) Financial Indicators of Water Districts (MTable 6.5.1)

e) Loan Status of Water Districts (MTable 6.5.2)

f) Past Internal Revenue Allotment to Municipalities from
   Central Government(STable 6.2.1)

4) *Water Source Development* (chap-7.xls)

a) Existing Groundwater Sources in the Province (MTable 7.1.1)

b) Work Flow of Groundwater Availability Map (SFigure 7.3.1)

c) Existing Spring Sources by Municipality (STable 7.4.1)

d) River Information and Related Data (STable 7.5.1)

e) Water Quality Analysis Results (STable 7.5.2)

f) Existing Well Sources (STable 7.6.1)

g) Standard Specification of Wells by Municipality (STable 7.6.2)

5) *Future Requirement in Water Supply and Sanitation Environment* (chap-8.xls)

1) Provincial Sector Targets (MTable 8.2.1)

2) Base Year Service Coverage of Water Supply (MTable 8.2.2)

3) Base Year Service Coverage of Household Toilets (MTable 8.2.3)

4) Base Year Service Coverage of Public School Toilets and
   Public Toilets (MTable 8.2.4)

5) Base Year Service Coverage of Municipal Solid Waste System in 1994 (MTable 8.2.5)

6) Future Population by Urban and Rural Area by Municipality (MTable 8.3.1)

7) Projected Public School Enrollment and Number of Public Utility
   by Municipality (MTable 8.3.2)

8) Population to be Served by Target Year (Water Supply) (MTable 8.5.1)

9) Additional Number of Households to be Served by Target Year
   (Household Toilets) (MTable 8.5.2)

10) Additional Number of Public School Student to be Served by
   Target Year (School Toilets) (MTable 8.5.3)

11) Additional Number of Public Utilities with Sanitary Toilets
by Target Year (MTable 8.5.4)

12) Population to be Served by Urban Sewerage in Phase II (MTable 8.5.5)

13) Additional Number of Urban Households to be Served by
Municipal Solid Waste System in Phase I (MTable 8.5.6)

14) Water Supply Facilities Required by Target Year (MTable 8.6.1)

15) Sanitation Facilities Required by Target Year (MTable 8.6.2)

16) Number of Garbage Collection Trucks Required in Phase I (MTable 8.6.3)

17) Estimation of Base Year Service Coverage of Water Supply (STable 8.2.1)

18) Population Coverage in Phase I Provided by Served Population
in the Base Year (STable 8.2.2)

19) Number of Households Served by Sanitary Toilets in the
Base Year (1994)(STable 8.2.3)

20) Number of Public School Student Served by School Toilets in the
Base Year (STable 8.2.4)

21) Number of Public Utilities with Sanitary Toilets in the
Base Year (1994) (STable 8.2.5)

22) Households Coverage in Phase I Provided by Existing Facilities in the
Base Year (Household Toilets) (STable 8.2.6)

23) Public School and Public Coverage in Phase I Provided by
Existing Facilities in the Base Year (STable 8.2.7)

24) Projected Number of Households by Urban and Rural Areas by
Municipality by Target Year (STable 8.3.5)

25) Projected School Enrollment by Municipality by Target Year (STable 8.3.6)

26) Projected Number of Public Utilities by Municipality by Target Year (STable 8.3.7)

27) Population to be Served by Level II System in Phase I (STable 8.5.1)

28) Population to be Served in Phase I (Water Supply) (STable 8.5.2)

29) Population to be Served in Phase II (Water Supply) (STable 8.5.3)

30) Additional Number of Households to be Served in
Phase I (Household Toilets) (STable 8.5.4)

31) Additional Number of Households to be Served in
Phase II (Household Toilets) (STable 8.5.5)

32) Additional Number of Public School Students to be Served in
Phase I and II (School Toilets) (STable 8.5.6)

33) Additional Number of Public Utilities with Sanitary Toilets in
Phase I and II (STable 8.5.7)

34) Urban Water Supply Facilities Required by Target Year (STable 8.6.1)

35) Plan for Expansion of Existing Level III System (STable 8.6.2)

36) Rural Water Supply Facilities Required by Target Year (STable 8.6.3)

37) Urban Household Toilets Required by Target Year (STable 8.6.4)

38) Rural Household Toilet Required by Target Year (STable 8.6.5)

39) Public School Toilets Required by Target Year (STable 8.6.6)

40) Public Toilets Required by Target Year (STable 8.6.7)

6) *Cost Estimates for Future Sector Development* (chap-10.xls)

a) Unit Cost of Facilities by Type and Service Level (MTable 10.2.1)

b) Construction Cost of Required Facilities by Municipality (MTable 10.3.1)

c) Recurrent Cost (MTable 10.4.1)

d) Unit Cost of Level I (Deep Well - 40 meter Depth) (STable 10.2.1)

e) Unit Cost of Level I (Deep Well - 80 meter Depth (STable 10.2.2)

f) Unit Cost of Level I (Deep Well - 120 meter Depth) (STable 10.2.3)

g) Unit Cost of Level I (Deep Well Rehabilitation) (STable 10.2.4)

h) Unit Cost of Level I (Shallow Well - 18 meter Depth) (STable 10.2.5)

i) Unit Cost of Level II (600 Service Population) (STable 10.2.6)
j) Unit Cost of Level III (5,000 Service Population) (STable 10.2.7)
k) Unit Cost of Level III (10,000 Service Population) (STable 10.2.8)
l) Unit Cost of Level III (15,000 Service Population) (STable 10.2.9)
m) Unit Cost of Flush Water Sealed with Septic Tank Toilet (STable 10.2.10)
n) Unit Cost of Pour Flush with Double Pit Latrine (STable 10.2.11)
o) Unit Cost of Ventilated Improved Pit Latrine (STable 10..2.12)
p) Unit Cost of School Toilet (STable 10.2.13)
q) Unit Cost of Public Toilet (STable 10.2.14)
r) Construction Cost of Water Supply Facilities Required for
   Phase I (2000) (STable 10.3.1)
s) Construction Cost of Water Supply Facilities Required for
   Phase II (2010) (STable 10.3.2)
t) Cost of Sanitation Facilities Required for Phase I (2000) (STable 10.3.3)
u) Cost of Sanitation Facilities Required for Phase II (2010) (STable 10.3.4)

7) *Financial Arrangements* (chap-11.xls)

a) Projected Internal Revenue Allotment for Medium-Term
   Sector Development (MTable 11.2.1)
b) Projected Allotment of IRA to the Relevant Sector by
   Component, 1996-2000 (MTable 11.2.2)
c) Financing Requirements by Sector Component for the Province (MTable 11.3.1)
d) Additional Fund Requirement for Medium-Term Plan (MTable 11.3.2)
e) Internal Revenue Allotment for Water Supply and Sanitation Sector
   by Municipality (Medium-Term Development 1996-2000) (MTable 11.3.3)
f) Relationship between Funding Levels and Percent of Coverage
   for Water Supply Sector (MFigure 11.4.1)
g) Relationship between Funding Levels and Percent of Coverage
   for Sanitation Sector (MFigure 11.4.2)
h) Municipal Investment Need Ranking for Urban Water Supply (MTable 11.4.1)
i) Distribution of Provincial IRA to Municipality for
   Urban Water Supply (MTable 11.4.2)
j) Municipal Investment Need Ranking (MTable 11.4.3)
k) Percentages for Annual Investment (STable 11.3.1)
l) Comprehensive Investment Need Ranking of the Municipalities (STable 11.4.1)

7.   DATA FILES LINKAGES

Linkages are logical connection between records in the data files. Through linkages, once the user's updates the source data, all data in the streams of linkages are dynamically updated. Linkages are the convenient tools of updating related data, these also shield the user's from the complexity of formula manipulation. With the aid of the data linkages the user's can concentrate more in validating the source data.

The following table lists the logical connections for each worksheet.

Table 2.6.2 Data File Linkages

Chapter No.	Table No.	Destination Link — Title	Source Link — Filename	Source Link — Table/Form Number	Source Link — Title
Chapter - 3	MT 3.1.1	Outline of City and Municipality	Socio.xls	M 1.2.2	Past Population Page 2
	MT 3.2.1	Current LandUse	Landuse.xls	M 2.1	Existing Landuse
	MF 3.3.1	Distribution of Households by Income Class	Chap-3.xls	ST 3.3.1	Distribution of Household by Income Class
	MF 3.3.2	Population Distribution by Occupation	Chap-3.xls	ST 3.3.2	Gainful Workers by Occupation Group and Major Industry Group
	MF 3.3.3	Population Distribution by Highest Attainment of Education	Chap-3.xls	ST 3.3.3	Household Population by Highest Education Attainment
	MT 3.4.1 & MF 3.4.1	Previous Population Development by Municipality	Socio.xls	MT 1.2.1	Past Population Page 1
				M 1.2.2	Past Population Page 2
	MF 3.4.2	Present Population Distribution	Socio.xls	M 1.2.2	Past Population Page 2
	MT 3.4.2	Outline of Urban and Rural Areas in the Province	Chap-3.xls	MT 3.1.1	Outline of City and Municipality
				ST 3.3.2	Education Level and Literacy of Population
			Socio.xls	M 1.2.2	Past Population Page 2
	MT 3.4.3	Households Numbers and Household Sizes	Socio.xls	M 1.4	Household Number
			Chap-3.xls	MT 3.4.2	Outline of Urban and Rural Areas in the Province
	MT 3.5.1	Number and Rates of Ten Leading Causes of Mobidity, Mortality & Infant Mortality	Health.xls	M 3.1	Morbidity and Mortality Summary
	MT 3.5.2	Reported Cases and Deaths of Notifiable Water related Diseases	Health.xls	M 3.1	Morbidity and Mortality Summary
	MT 3.6.1	Municipal Solid Waste Collection and Disposal, and Service Coverage, 1994	Socio.xls	M 1.4	Household Number
			Sanit.xls	M 6.5	SolidWaste Collection and Disposal
			Chap-3.xls	MT 3.3.2	Public Facilities and Services by Municipality
	ST 3.3.1	Number of Family by Income Class by Municipality	Socio.xls	M 1.7	Family Income and Education
	ST 3.3.2	Population Distribution by Occupation	Socio.xls	M 1.6	Occupation
	ST 3.3.3	Education Level and Literacy of Population	Socio.xls	M 1.7	Family Income and Education
Chapter - 4	MT 4.1.2	Information on Existing Level III Systems	Chap-4.xls	ST 4.1.1 Sheet 1, 3, and 4	Information on Existing Level III Systems

Note: MT - Main Report Table, MF - Main Report Figure, ST - Supporting Report Table,
M - Questionnaire Form (Municipal Data), S - Questionnaire Form (System Data), F - Questionnaire Form (Facility Data).

Table 2.6.2   Data File Linkages

Destination Link			Source Link		
Chapter No.	Table No.	Title	Filename	Table/Form Number	Title
Chapter - 4	MT 4.1.3	Information on Water District Data	Chap-4.xls	ST 4.1.1 Sheet 1 & 4	Information on Existing Level III System
	MT 4.1.4	Information on Existing Level II System	Chap-4.xls	ST 4.1.2 Sheet 1 & 2	Existing Level II System
	MT 4.1.5	Estimation of Unserved Population by Municipality	Chap-4.xls	ST 4.1.4	Number of Level I Facilities by Safe and Unsafe Classification
				ST 4.1.6 Sheet 1 & 2	Estimation of Population Covered by Safe and Unsafe Source by Municipality
	MT 4.1.7	Water Supply Service Coverage by Municipality	Chap-4.xls	ST 4.1.6 Sheet 2	Estimation of Population Covered by Safe and Unsafe Source by Municipality
			Socio.xls	M 1.3	Projected Population
	MT 4.2.1	Sanitation Facilities and Service Coverage of Household Toilets, Urban and Rural, 1994	Socio.xls	M 1.4	Household Number
			Chap-4.xls	ST 4.2.1	Sanitation Facilities and Service Coverage of Household Toilets, by Type, by Municipality, Urban and Rural, 1994
	MT 4.2.2 Sheet 1	School Toilets Facilities and Service Coverage, 1994	Sanit.xls	M 6.2	School Toilets
	MT 4.2.2 Sheet 2	Public Toilets Facilities and Service Coverage, 1994	Sanit.xls	M 6.3	Public Toilets
	MF 4.1.1	Water Supply Coverage of the Province	Chap-4.xls	MT 4.1.7	Water Supply Service Coverage by Municipality
	ST 4.1.4	Number of Level I Facilities by Safe and Unsafe Classification	H2OSupp.xls	(F) 5.3.1	Level I Facility
			Keypar.xls	ST 2.6.5	Level I Safe and Unsafe Percentage
	ST 4.1.5	Estimation of Unserved Population by Municipality	Socio.xls	M 1.2.2	Past Population Page 2
			Chap-4.xls	ST 4.1.6 Sheet 1 & 2	Estimation of Population covered by Safe and Unsafe
				ST 4.1.2 Sheet 2	Details on Existing Level II System
	ST 4.2.1	Sanitation Facilities and Service of Household Toilets by Type, by Municipality, Urban and Rural, 1994	Socio.xls	M 1.4	Household Number
			Sanit.xls	M 6.1	Household Toilets

Note: MT - Main Report Table. MF - Main Report Figure. ST - Supporting Report Table.
M - Questionnaire Form (Municipal Data). S - Questionnaire Form (System Data). F - Questionnaire Form (Facility Data).

Table 2.6.2   Data File Linkages

Destination Link			Source Link		
Chapter No.	Table No.	Title	Filename	Table/Form Number	Title
Chapter - 4	ST 4.1.6 Sheet 1	Estimation of Population Covered by Safe and Unsafe Source by Municipality	Chap-4.xls	ST 4.1.4	Number of Level I Facilities by Safe and Unsafe Classification
				ST 4.1.5	Estimation of Unserved Population by Municipality
	ST 4.1.6 Sheet 2	Estimation of Population Covered by Safe and Unsafe Source by Municipality	Chap-4.xls	ST 4.1.5	Estimation of Unserved Population by Municipality
				ST 4.1.6 Sheet 1	Estimation of Population Covered by Safe and Unsafe Source by Municipality
Chapter - 8	MT 8.2.1	Provincial Sector Targets	Keypar.xls Chap-8.xls	ST 2.6.2 MT 8.5.1	Key Parameter Table Population to be served by target year(Water Supply)
				MT 8.5.2	Additional Number of Households to be Served by Target Year(Household Toilets)
				MT 8.5.5	Population to be Served in Urban Sewerage in Phase II
				MT 8.5.6	Add'l No.of Urban Households to be served by Municipal Solid Waste System in Phase I
				ST 8.5.7	Number of Public Utilities with Sanitary Toilets in Phases I and II
				ST 8.6.6	Public School Toilets Required by Target Year
	MT 8.2.2	Base Year Coverage in Water Supply	Chap-4.xls Chap-8.xls	MT 4.1.7 ST 8.2.1	Water Supply Service Coverage by Municipality Estimation of Base Year Service Coverage of Water Supply
				MT 8.3.1	Future Population by Urban and Rural Area by Municipality
	MT 8.2.3	Base Year Service Coverage of Household Toilets	Chap-8.xls	ST 8.2.3	Number of Households Served by Sanitary Toilets in the Base Year(1994)
				MT 8.3.1	Future Population by Urban and Rural Area by Municipality
	MT 8.2.4	Base Year Service Coverage of Public School Toilets and Public Toilets	Chap-4.xls	MT 4.2.2 Sheet 1	Scool Toilet Facilities and Service Coverage in 1994

Note: MT - Main Report Table,   MF - Main Report Figure,   ST - Supporting Report Table,
M - Questionnaire Form (Municipal Data),   S - Questionnaire Form (System Data),   F - Questionnaire Form (Facility Data).

Table 2.6.2   Data File Linkages

Destination Link			Source Link		
Chapter No.	Table No.	Title	Filename	Table/Form Number	Title
Chapter - 8	MT 8.2.4	Base Year Service Coverage of Public School Toilets and Public Toilets	Chap-8.xls	ST 8.2.4	Number of Public School Students Served by School Toilets in the Base Year (1994)
				ST 8.2.7	Public School Students and Public Utilities Coverage in Phase I Provided by Existing Facilities in the Base Year
	MT 8.2.5	Base Year Service Coverage of Municipal Solid Waste System in 1994	Chap-3.xls	MT 3.6.1	Municipal Solid Waste Collection and Disposal, and Service Coverage, 1994
			Chap-8.xls	ST 8.3.5	Projected No. of Households by Urban and Rural Area by Municipality by Target Year
	MT 8.3.1	Future Population by Urban and Rural Area by Municipality	Socio.xls	M 1.2.2	Past Population Page 2
				M 1.3	Projected Population
	MT 8.3.2	Projected Public School Enrollment and Number of Public Utility Facilities by Municipality	Chap-8.xls	ST 8.3.6	Projected School Enrollment by Municipality by Target Year
				ST 8.3.7	Projected No. of Public Utilities by Municipality by Target Year
	MT 8.5.1	Population to be Served by Target Year(Water Supply)	Chap-8.xls	ST 8.2.2	Population Coverage in Phase I Provided by Served Population in the Base Year(Water Supply)
				ST 8.5.2	Population to be Served in Phase I (Water Supply)
				ST 8.5.3	Population to be Served in Phase II (Water Supply)
	MT 8.5.2	Additional Number of Households to be Served by Target Year(Household Toilets)	Chap-8.xls	ST 8.5.4	Additional Number of Households to be Served in Phase I(Household Toilets)
				ST 8.5.5	Additional Number of Households to be Served in Phase II (Household Toilets)
	MT 8.5.3	Additional Number of Public School Students to be Served by target Year(School Toilets)	Chap-8.xls	ST 8.3.6	Projected School Enrollment by Municipality by Target Year
				ST 8.5.6	Additional Number of Public School Students to be Served in Phases I and II(School Toilets)
	MT 8.5.4	Additional Number of Public Utilities with Sanitary Toilets by Target Year	Chap-8.xls	ST 8.5.7	Number of Public Utilities with Sanitary Toilets in Phases I and II
	MT 8.5.5	Population to be Served by Urban Sewerage in Phase II	Chap-8.xls	MT 8.2.1	Provincial Sector Targets
				MT 8.3.1	Future Population by Urban and Rural Area by Municipality

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Table 2.6.2   Data File Linkages

Destination Link			Source Link		
Chapter No.	Table No.	Title	Filename	Table/Form Number	Title
Chapter - 8	MT 8.5.5	Population to be Served by Urban Sewerage in Phase II	Chap-8.xls	MT 8.5.1	Population to be Served by Target Year(Water Supply)
	MT 8.5.6	Add'l No. of Urban Households to be Served by Municipal Solid Waste System in Phase I	Chap-8.xls	MT 8.2.1	Provincial Sector Targets
				MT 8.2.5	Base Year Service Coverage of Municipal Solid Waste System in 1994
			Chap-8.xls	ST 8.3.5	Projected No. of Households by Urban and Rural Area by Municipality by Target Year
	MT 8.6.1	Water Supply Facilities Required by Target Year	Chap-8.xls	ST 8.6.1	Urban Water Supply Facilities Required by Target Year
				ST 8.6.3	Rural Water Supply Facilities Required by Target Year
	MT 8.6.2	Sanitation Facilities Required by Target Year	Chap-8.xls	MT 8.3.1	Future Population by Urban and Rural Area by Municipality
				MT 8.5.2	Additional No. of Household to be Served by Target Year(Household Toilets)
				ST 8.5.7	Number of Public Utilities with Sanitary Toilets in Phases I and II
				ST 8.6.6	Public School Toilets Required by Target Year
	MT 8.6.3	Number of Garbage Collection Trucks Required in Phase 1	Chap-8.xls	MT 8.5.6	Add'l No. of Urban Households to be Served by Municipal Solid Waste System in Phase 1
	ST 8.2.1	Estimation of Base Year Service Coverage of Water Supply	Chap-4.xls	MT 4.1.7	Water Supply Service Coverage by Municipality
			Chap-8.xls	MT 8.3.1	Future Population by Urban and Rural Area by Municipality
	ST 8.2.2	Population Coverage in Phase I Provided by Served Population in the Base Year (Water Supply)	Chap-8.xls	MT 8.2.2	Base Year Coverage in Water Supply
				MT 8.3.1	Future Population by Urban and Rural Area by Municipality
	ST 8.2.3	Number of Households Served by Sanitary Toilets in the Base Year (1994)	Chap-4.xls	ST 4.2.1	Sanitation Facilities and Service of Household Toilets by Type, by Municipality, Urban and Rural, 1994
			Chap-8.xls	MT 8.3.1	Future Population by Urban and Rural Area by Municipality

Note: MT - Main Report Table.   MF - Main Report Figure.   ST - Supporting Report Table.
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Table 2.6.2 Data File Linkages

Destination Link			Source Link		
Chapter No.	Table No.	Title	Filename	Table/Form Number	Title
Chapter - 8	ST 8.2.3	Number of Households Served by Sanitary Toilets in the Base Year (1994)	Chap-8.xls	ST 8.3.5	Projected Number of Households by Urban and Rural Area by Municipality by Target Year
	ST 8.2.4	Number of Public School Students Served by School Toilets in the Base Year(1994)	Chap-4.xls / Chap-8.xls	MT 4.2.2 Sheet 1 / ST 8.3.6	School Toilets Facilities and Service Coverage. 1994 / Projected School Enrollment by Municipality by Target Year
	ST 8.2.5	Number of Public Utilities with Sanitary Toilets in the Base Year (1994)	Chap-4.xls	MT 4.2.2 Sheet 2	Public Toilets Facilities and Service Coverage. 1994
	ST 8.2.6	Household Coverage in Phase 1 Provided by Existing Facilities in the Base Year (Household Toilets)	Socio.xls / Chap-8.xls	M 1.4 / MT 8.2.3 / ST 8.2.3 / ST 8.3.5	Household Number / Base Year Service Coverage of Household Toilets / Number of Households Served by Sanitary Toilets in the Base Year (1994) / Projected Number of Households by Urban and Rural Area by Municipality by Target Year
	ST 8.2.7	Public School Students and Public Utilities Coverage in Phase 1 Provided by Existing Facilities in the Base Year	Chap-8.xls	ST 8.2.4 / ST 8.2.5 / ST 8.3.6 / ST 8.3.7	Number of Public School Students Served by School Toilets in the Base Year(1994) / Number of Public Utilities with Sanitary Toilets in the Base Year (1994) / Projected School Enrollment by Municipality by Target Year / Projected No. of Public Utilities by Municipality by Target Year
	ST 8.3.5	Projected Number of Households by Urban and Rural Area by Municipality by Target Year	Socio.xls	M 1.2.2 / M 1.3 / M 1.4	Past Population Page 2 / Projected Population / Household Number
	ST 8.3.6	Projected School Enrollment by Municipality by Target Year	Socio.xls	M 1.2.2 / M 1.3	Past Population Page 2 / Projected Population
	ST 8.3.7	Projected Number of Public Utilities by Municipality by Target Year	Chap-8.xls	ST 8.2.5	Number of Public Utilities with Sanitary Toilets in the Base Year (1994)

Note: MT - Main Report Table. MF - Main Report Figure. ST - Supporting Report Table.
M - Questionnaire Form (Municipal Data). S - Questionnaire Form (System Data). F - Questionnaire Form (Facility Data).

Table 2.6.2   Data File Linkages

| Destination Link | | | Filename | Source Link | |
Chapter No.	Table No.	Title		Table/Form Number	Title
Chapter - 8	ST 8.5.1	Population to be Served by Level II System in Phase I	Socio.xls	M 1.1	Administrative Composition
			Chap-8.xls	ST 8.3.5	Projected Number of Households by Urban and Rural Area by Municipality by Target Year
	ST 8.5.2	Population to be served in Phase I (Water Supply)	Socio.xls	M 1.3	Projected Population
				MT 8.2.2	Base Year Coverage in Water Supply
			Chap-8.xls	ST 8.5.1	Population to be Served by Level II System in Phase I
	ST 8.5.3	Population to be Served in Phase II(Water Supply)	Socio.xls	M 1.3	Projected Population
			Chap-8.xls	ST 8.5.2	Population to be Served in Phase I (Water Supply)
	ST 8.5.4	Additional Number of Households to be Served in Phase II(Household Toilets)	Chap-8.xls	MT 8.2.1	Provincial Sector Targets
				ST 8.2.3	Number of Households Served by Sanitary Toilets in the Base Year (1994)
				ST 8.3.5	Projected Number of Households by Urban and Rural Area by Municipality by Target Year
	ST 8.5.5	Additional Number of Households to be Served in Phase II(Household Toilets)	Chap-8.xls	MT 8.2.1	Provincial Sector Targets
				ST 8.3.5	Projected Number of Households by Urban and Rural Area by Municipality by Target Year
				ST 8.5.4	Additional Number of Households to be Served in Phase I(Household Toilets)
	ST 8.5.6	Additional Number of Public School Students to be Served in Phases I and II (School Toilets)	Chap-8.xls	MT 8.2.1	Provincial Sector Targets
				ST 8.2.4	Number of Public School Students Served by School Toilets in the Base Year(1994)
				ST 8.3.6	Projected School Enrollment by Municipality by Target Year
	ST 8.5.7	Number of Public Utilities with Sanitary Toilets in Phases I and II	Chap-8.xls	MT 8.2.1	Provincial Sector Targets
				ST 8.2.5	Number of Public Utilities with Sanitary Toilets in the Base Year (1994)
				ST 8.3.7	Projected Number of Public Utilities by Municipality by Target Year

Note: MT - Main Report Table.   MF - Main Report Figure.   ST - Supporting Report Table.
M - Questionnaire Form (Municipal Data).   S - Questionnaire Form (System Data).   F - Questionnaire Form (Facility Data).

Table 2.6.2   Data File Linkages

Chapter No.	Table No.	Destination Link — Title	Filename	Table/Form Number	Source Link — Title
Chapter - 8	ST 8.6.1	Urban Water Supply Facilities Required by Target Year	Socio.xls	M 1.3	Projected Population
			Keypar.xls	ST 2.6.2	Key Parameter Table
			Chap-4.xls	ST 4.1.1 Sheet 1 and 3	Details on Existing Level III Systems
			Chap-8.xls	ST 8.3.5	Projected Number of Households by Urban and Rural Area by Municipality by Target Year
				MT 8.4.1	GroundWater Productivity
				ST 8.5.2	Population to be Served in Phase I (Water Supply)
			Chap-8.xls	ST 8.5.3	Population to be Served in hase II (Water Supply)
	ST 8.6.3	Rural Water Supply Facilities Required by Target Year	Chap-7.xls	ST 7.6.2	Standard Specification of Water in the Municipality
			Chap-8.xls	ST 8.3.5	Projected Number of Households by Urban and Rural Area by Municipality by Target Year
				MT 8.4.1	GroundWater Productivity
				ST 8.5.1	Population to be Served by Level II System in Phase I
	ST 8.6.4	Urban Household Toilets Required by Target Year	Chap-8.xls	MT 8.5.2	Additional Number of Households to be Served by Target Year(Household Toilets)
	ST 8.6.5	Rural Household Toilets Required by Target Year	Chap-8.xls	MT 8.5.2	Additional Number of Households to be Served by Target Year(Household Toilets)
	ST 8.6.6	Public School Toilets Required by Target Year	Chap-8.xls	ST 8.5.6	Additional Number of Public School Student to be Served in Phase I and Phase II (School Toilets)
	ST 8.6.7	Public Toilets Required by Target Year	Chap-8.xls	ST 8.5.7	Number of Public Utilities with Sanitary Toilets in Phases I and II
Chapter - 10	MT 10.2.1	Unit Cost of Facilities by Type and Service Level	Keypar.xls	ST 2.6.6	Unit Construction Cost of Different Facilities
	MT 10.3.1	Construction Cost of Required Facilities by Municipality	Chap-10.xls	ST 10.3.1	Construction Cost of Water Supply Facilities Required for Phase I (2000)
				ST 10.3.2	Construction Cost of Water Supply Facilities Required for Phase II (2010)
				ST 10.3.3	Cost of Sanitation Facilities Required for Phase I (2000)
				ST 10.3.4	Costs of Sanitation Facilities Required for Phase II (2010)

Note: MT - Main Report Table.   MF - Main Report Figure.   ST - Supporting Report Table.
M - Questionnaire Form (Municipal Data).   S - Questionnaire Form (System Data).   F - Questionnaire Form (Facility Data).

Table 2.6.2   Data File Linkages

Destination Link			Source Link		
Chapter No.	Table No.	Title	Filename	Table/Form Number	Title
Chapter - 10	MT 10.4.1	Recurrent Cost	Keypar.xls	ST 2.6.2	Key Parameter Table
			Chap-8.xls	MT 8.2.2	Base Year Coverage in Water Supply
				MT 8.2.4	Base Year Service Coverage of Public School Toilets and Public Toilets
				ST 8.3.5	Projected Number of Households by Urban and Rural Area by Municipality by Target Year
				MT 8.5.1	Population to be Served by Target Year(Water Supply)
				ST 8.6.6	Public School Toilets Required by Target Year
				ST 8.6.7	Public Toilets Required by Target Year
			Chap-11.xls	ST 11.3.1	Percentages for Annual Investments
	ST 10.3.1	Construction Cost of Water Supply Facilities Required for Phase I (2000)	Chap-8.xls	MT 8.5.1	Population to be Served by Target Year(Water Supply)
				MT 8.6.1	Water Supply Facilities Required by Target Year
				ST 8.6.3	Number of Garbage Collection Trucks Required in Phase 1
			Chap-10.xls	MT 10.2.1	Unit Cost of Facilities by Type and Service Level
	ST 10.3.2	Construction of Water Supply Facilities Required for Phase II (2010)	Keypar.xls	ST 2.6.2	Key Parameter Table
			Chap-8.xls	MT 8.5.1	Population to be Served by Target Year(Water Supply)
				ST 8.6.3	Number of Garbage Collection Trucks Required in Phase 1
			Chap-10.xls	MT 10.2.1	Unit Cost of Facilities by Type and Service Level
	ST 10.3.3	Cost of Sanitation Facilities Required for Phase I (2000)	Chap-8.xls	MT 8.6.2	Sanitation Facilities Required by Target Year
				ST 8.6.7	Public Toilets Required by Target Year
			Chap-10.xls	MT 10.2.1	Unit Cost of Facilities by Type and Service Level
	ST 10.3.4	Cost of Sanitation Facilities Required for Phase II (2010)	Chap-8.xls	MT 8.3.1	Future Population by Urban and Rural Area by Municipality
				MT 8.5.5	Population to be Served by Urban Sewerage in Phase II
				MT 8.6.2	Sanitation Facilities Required by Target Year

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M - Questionnaire Form (Municipal Data).   S - Questionnaire Form (System Data).   F - Questionnaire Form (Facility Data).

Table 2.6.2   Data File Linkages

Destination Link			Source Link		
Chapter No.	Table No.	Title	Filename	Table/Form Number	Title
Chapter - 10	ST 10.3.4	Cost of Sanitation Facilities Required for Phase II (2010)	Chap-8.xls Chap-10.xls	ST 8.6.6 ST 8.6.7 MT 10.2.1	Public School Toilets Required by Target Year Public Toilets Required by Target Year Unit Cost of Facilities by Type and Service Level
Chapter - 11	MT 11.2.1	Projected Internal Revenue Allotment for Medium-Term Sector Development	Socio.xls Keypar.xls Chap-6.xls	M 1.1 ST 2.6.2 MT 6.2.2	Administrative Composition Key Parameter Table Past Internal Revenue Allotment to the Province from Central Government
	MT 11.2.2	Project Allotment of IRA to the Revelant Sector by Component 1996-2000	Chap-11.xls	MT 11.2.1	Projected Internal Revenue Allotment for Medium - Term Sector Development
	MT 11.3.1	Financing Requirements by Sector Component for the Province	Chap-10.xls Chap-11.xls	ST 10.3.2 ST 11.3.1	Construction of Water Supply Facilities Required for Phase II (2010) Percentage for Annual Investments
	MT 11.3.2	Additional Fund Requirement for the Medium-Term Plan	Chap-11.xls	MT 11.3.1	Financing Requirements by Sector Component for the Province
	MT 11.3.3	Internal Revenue Allotment for Water Supply and Sanitation Sector by Municipality (Medium-Term Development /1996-2000)	Chap-10.xls Chap-11.xls	ST 10.3.1 ST 10.3.3 MT 11.2.2 MT 11.3.1 MT 11.4.2	Construction Cost of Water Supply Facilities Required for Phase I (2000) Cost of Sanitation Facilities Required for Phase I (2000) Project Allotment of IRA to the Revelant Sector by Component 1996 - 2000 Financing Requirements by Sector Component for the Province Distribution of Provincial IRA to Municipalities for Urban Water Supply
	MT 11.4.1	Municipal Investment need Ranking for Urban Water Supply	Keypar.xls Chap-8.xls	ST 2.6.7 ST 8.2.2 MT 8.2.2	Scoring Factor for Municipal Investment Ranking for Urban Water Supply Number of Households Served by Sanitary Toilets in the Base Year (1994) Base Year Coverage in Water Supply
	MT 11.4.2	Distribution of Provincial IRA to Municipalities for Urban Water Supply	Chap-11.xls	MT 11.2.2	Project Allotment of IRA to the Revelant Sector by Component 1996 - 2000

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M - Questionnaire Form (Municipal Data).   S - Questionnaire Form (System Data),   F - Questionnaire Form (Facility Data).

Table 2.6.2   Data File Linkages

Destination Link			Source Link		
Chapter No.	Table No.	Title	Filename	Table/Form Number	Title
Chapter-11	MT 11.4.2	Distribution of Provincial IRA to Municipalities for Urban Water Supply	Chap-4.xls	MT 11.3.1	Financing Requirement by Sector Component for the Province
				MT 11.4.1	Municipal Investment need Ranking for Urban Water Supply
			Chap-10.xls	ST 10.3.1	Construction Cost of Water Supply Facilities Required for Phase I (2000)
				ST 10.3.3	Cost of Sanitation Facilities Required for Phase I (2000)
	MT 11.4.3	Municipal Investments Need Ranking	Chap-11.xls	ST 11.4.1	Comprehensive Investment need Ranking of Municipalities
	ST 11.3.1	Percentages for Annual Investments	Keypar.xls	ST 2.6.4	Annual Distribution of Investment Cost Required by Sub-Sector for Medium-Term Development Plan
	ST 11.4.1	Comprehensive Investment need Ranking of Municipalities	Keypar.xls	ST 2.6.8	Scoring Factor for Municipal Comprehensive Investment Ranking
			Chap-8.xls	ST 8.2.2	Population Coverage in Phase I Provided by Served Population in the Base Year (Water Supply)
				MT 8.2.3	Base Year Service Coverage of Household Toilets
			Chap-11.xls	MT 11.4.1	Municipal Investment need Ranking for Urban Water Supply

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8.   UPDATING PW4SP DATA BASE

The following procedures are guide in updating the base data of the PW4SP data management system. The word *column* and *row* in this procedure mean the internal column and row notation in the worksheet environment.

8.1.   Updating Socio-economic Data Base

1. Click the File menu, select Open.
   Short-cut: Click the Open button.
2. From the Open Dialog Box. Select the *socio.xls* filename.
3.1 To update the Administrative Composition Data,
   click the tab of *(M) Area and Population* sheet.

- *NEDA geopgraphic code*: move mouse pointer to column A. Starting at the row below the column description, select the data you would like to update and type the new value.

- *Municipal Name*: move mouse pointer to column B. Starting at the row below the column description, in reference to column A (NEDA geographic code) select the data you would like to update and type the new value.

- *City:* move mouse pointer to column C. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Municipal:* move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Class:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Urban Barangay:* move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Rural Barangay:* move mouse pointer to column K. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

3.2 To update the Past Population Data,
   click the tab of *(M) Past Population Page I* sheet.

- *1903:* move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *1918:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *1939*: move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *1948:* move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *1960*: move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *1970:* move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *1975*: move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

click the tab of *(M) Past Population Page 2* sheet.

- *Urban Population (1980):* move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Rural Population (1980):* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Urban Population (1990):* move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Rural Population (1990):* move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Urban Population (1994):* move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Rural Population (1994):* move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

3.3 To update the **Population Projection Data,**
   click the tab of *(M) Project Population* sheet.

- *Urban Population (2000):* move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Rural Population (2000):* move mouse pointer to column K. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Urban Population (2010)*: move mouse pointer to column S. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Rural Population (2010)*: move mouse pointer to column U. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

3.4 To update the Household Data,
click the tab of *(M) Household* sheet.

- *Urban Household (1980)*: move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Rural Household (1980)*: move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Urban Household (1990)*: move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Rural Household (1990)*: move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Urban Household (1994)*: move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Rural Household (1994)*: move mouse pointer to column K. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

3.5 To update the Services Data,
click the tab of *(M) Services* sheet.

- *Number of Public Elementary School*: move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Private Elementary School*: move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Public High School*: move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Private High School*: move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Colleges*: move mouse pointer to column L. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Hospitals:* move mouse pointer to column M. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Markets:* move mouse pointer to column N. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Banks:* move mouse pointer to column O. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

3.6 To update the **Occupation Data,**
    click the tab of *(M) Occupation* sheet.

- *Number of Professional,Technical and Related Workers:* move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Administrative, Executive and Managerial:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Sales Workers:* move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Service Workers:* move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Agricultural, Animal Husbandry & Forestry Workers, Fisherman and Hunetrs,* move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Production & Related Workers, Transportation Equipment Operators and Laborers:* move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Occupation Not Adequately Defined or Reported:* move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

3.7 To update the **Family Income, Education and Literacy Data,**
    click the tab of *(M) Family Income and Education* sheet.

- *Number of Family Receiving Under P 13,999:* move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Family Receiving Between P 15,000 to P 29,999:* move mouse pointer to column E. Starting at the row below the column description, in reference to

column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Family Receiving Between P 30,000 to P 39,999*: move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Family Receiving Between P 40,000 to P 59,999*: move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Family Receiving over P 60,000*: move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Population that Finish Pre-School*: move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Population that Finish Elementary School*: move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Population that Finish High School*: move mouse pointer to column K. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Population that Finish College and Post Graduate*, move mouse pointer to column L. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Literate Population:* move mouse pointer to column M. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Illiterate Population:* move mouse pointer to column N. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

8.2. Updating Land Use Data Base

1. Click the File menu, select Open.
   Short-cut: Click the Open button.
2. From the Open Dialog Box. Select the *landuse.xls* filename.
3.1 To update the Existing Land Use Data,
   click the tab of *(M) Existing Land Use* sheet.

- *Forest Land Area:* move mouse pointer to column C. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Grass Land Area:* move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Built-up Land Area:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Agricultural Land Area:* move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Mangrove, Fishponds, In-land Area:* move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Open Land Area:* move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

3.2 To update the **Future Land Use Data**,
click the tab of *(M) Future Land Use* sheet.

- *Forest Land Area:* move mouse pointer to column C. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Grass Land Area:* move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Built-up Land Area:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Agricultural Land Area:* move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Mangrove, Fishponds, In-land Area:* move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Open Land Area:* move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

8.3. Updating Health Data Base

1. Click the File menu, select Open.
   Short-cut: Click the Open button.
2. From the Open Dialog Box. Select the *health.xls* filename.
3.1 To update the **Morbidity, Mortality and Infant Mortality Data**,
   click the tab of *(M) Morbidity and Mortality* sheet.

- *Number of Morbidity Case*: move mouse pointer to column E. Starting at the row below the column description, in reference to column C (name of diseases) select the data you would like to update and type the new value.

- *Number of Mortality Case*: move mouse pointer to column F. Starting at the row below the column description, in reference to column C (name of diseases) select the data you would like to update and type the new value.

- *Number of Infant Mortality Case*: move mouse pointer to column G. Starting at the row below the column description, in reference to column C (name of diseases) select the data you would like to update and type the new value.

3.2 To update the **Facility and Practitioner Data**
click the tab of *(M) Facility and Practitioner* sheet.

- *Number of Hospital Facility*: move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Rural Health Unit (RHU)*: move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Barangay Health Station (BHS)*: move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Practicing Doctors*: move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Practicing Nurses*: move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Practicing Midwives:* move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Practicing Dentists*: move mouse pointer to column K. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

8.4. Updating Water Resources Data Base

1. Click the File menu, select Open.
   Short-cut: Click the Open button.
2. From the Open Dialog Box. Select the *h2o-res.xls* filename.
3. To update the General Information Data,
   click the tab of *(M) General Information* sheet.

- *Number of Shallow (General Information)*: move mouse pointer to column E/H. Starting at the row below the column description, in reference to column C (description of information) select the data you would like to update and type the new value.

- *Number of Deep Well (General Iinformation)*: move mouse pointer to column F/I. Starting at the row below the column description, in reference to column C (description of information) select the data you would like to update and type the new value.

- *Number of spring (General Information)*: move mouse pointer to column G/J. Starting at the row below the column description, in reference to column C (description of information) select the data you would like to update and type the new value.

Note: To add succeeding municipality. Copy *(M) General Information* sheet and erase the default data and type the new data following the aforementioned procedures.

8.5. Updating Water Supply Data Base

1. Click the File menu, select Open.
   Short-cut: Click the Open button.
2. From the Open Dialog Box. Select the *h2osupp.xls* filename.
3.1 To update the Level III System Data,
   click the tab of *(S) Level III P1-4* sheet.

- *Data*: move mouse pointer to column G.Starting at the row below the column description, in reference to column B (Info Description) select the data you would like to update and type the new data.

click the tab of *(S) Level III P2-4* sheet.

- *Data*: move mouse pointer to column G.Starting at the row below the column description, in reference to column B (Info Description) select the data you would like to update and type the new data.

click the tab of *(S) Level III P3-4* sheet.

- *Data*: move mouse pointer to column G.Starting at the row below the column description, in reference to column B (Info Description) select the data you would like to update and type the new data.

click the tab of *(S) Level III P4-4* sheet.

- *Data*: move mouse pointer to column G.Starting at the row below the column description, in reference to column B (Info Description) select the data you would like to update and type the new data.

3.2 To update the Level II System Data,
   click the tab of *(S) Level II P1-2* sheet.

- *Data*: move mouse pointer to column G.Starting at the row below the column description, in reference to column B (Info Description) select the data you would like to update and type the new data.

click the tab of *(S) Level II P2-2* sheet.

- *Data*: move mouse pointer to column G.Starting at the row below the column description, in reference to column B (Info Description) select the data you would like to update and type the new data.

3.3 To update the Level I Facility Data,
click the tab of *(F) Level I* sheet.

Public Facility:

- *Deep Well*: move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Shallow Well*: move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Covered/Improved Dug Well*: move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Open Dug Well*: move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Developed Spring*: move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Undeveloped Spring*: move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

Private Facility:

- *Deep Well*: move mouse pointer to column L. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Shallow Well*: move mouse pointer to column M. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Covered/Improved Dug Well*: move mouse pointer to column N. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Open Dug Well*: move mouse pointer to column O. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Rain Collector*: move mouse pointer to column P. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

8.6. Updating Environmental Sanitation Data base

1. Click the File menu, select Open.
   Short-cut: Click the Open button.
2. From the Open Dialog Box. Select the *sanit.xls* filename.
3.1 To update the Household Toilet Data,
   click the tab of *(M) Household Toilets* sheet.

- *Number of Urban Households Using Water Sealed Flush Toilet*: move mouse pointer to column C. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Rural Households Using Water Sealed Flush Toilet*: move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Urban Households Using Water Sealed Pour Flush Toilet*: move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Rural Households Using Water Sealed Pour Flush Toilet*: move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Urban Households Using VIP Latrine Toilet*: move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Rural Households Using VIP Latrine Toilet*: move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Urban Households Using Unsanitary Toilet*: move mouse pointer to column K. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Rural Households Using Unsanitary Toilet*: move mouse pointer to column L. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Urban Households Without Toilet*: move mouse pointer to column N. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Rural Households Without Toilet*: move mouse pointer to column O. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

click the tab of *(M) School Toilets* sheet.

- *Number of Public School*: move mouse pointer to column C. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Private School*: move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Student in Public School*: move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Student in Private School*: move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Sanitary Toilets in Public School*: move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Sanitary Toilets in Private School*: move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Unsanitary Toilets in Public School*: move mouse pointer to column L. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Unsanitary Toilets in Private School*: move mouse pointer to column M. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

click the tab of *(M) Public Toilets* sheet.

- *Number of Public Markets*: move mouse pointer to column C. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Sanitary Toilets in Public Markets*: move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Unsanitary Toilets in Public Markets*: move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Jeepney/Bus Terminals*: move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Sanitary Toilets in Jeepney/Bus Terminal*: move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Unsanitary Toilets in Jeepney/Bus Terminal*: move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Parks/Playground*: move mouse pointer to column K. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Sanitary Toilets in Parks/Playground*: move mouse pointer to column L. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Unsanitary Toilets in Parks/Playground*: move mouse pointer to column M. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

click the tab of *(M) Drainage Facility* sheet.

- *Length of Drainage Main*: move mouse pointer to column C. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Length of Open Channel (with concrete and masonry)*: move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Length of Open Ditches And Unlined Laterals*: move mouse pointer to column E. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Length of Reinforced Concrete Circular Pipes*: move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Length of Street Gutters*: move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Length of Outfalls To Rivers From Drainage Mains*: move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

click the tab of *(M) Solid Waste* sheet.

- *Number of Open Dump Trucks*: move mouse pointer to column C. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Closed Type Trucks*: move mouse pointer to column D. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Households Served By Open Dump Site*: move mouse pointer to column F. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Households Served By Sanitary Landfill*: move mouse pointer to column G. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Households Depending on Dumping on Land or Water*: move mouse pointer to column H. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Households Depending on Burying*: move mouse pointer to column I. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

- *Number of Households Depending on Composting*: move mouse pointer to column J. Starting at the row below the column description, in reference to column B (name of municipality) select the data you would like to update and type the new value.

8.7. Updating Investment Data Base

1. Click the File menu, select Open.
   Short-cut: Click the Open button.
2. From the Open Dialog Box. Select the *invest.xls* filename.
3.1 To update the Past Investment Data,
   click the tab of *(P) Past Invest* sheet.

- *Shallow Well*: move mouse pointer to column C. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

- *Deep Well*: move mouse pointer to column D. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

- *Spring Development*: move mouse pointer to column E. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

- *Well Rehabilitation*: move mouse pointer to column F. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

- *Rain Collector*: move mouse pointer to column G. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

- *Level II System*: move mouse pointer to column H. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

- *Level III System:* move mouse pointer to column I. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

- *Sewer System:* move mouse pointer to column J. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

- *Private Latrines:* move mouse pointer to column K. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

- *School Toilets:* move mouse pointer to column L. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

- *Public Toilets:* move mouse pointer to column M. Starting at the row below the column description, in reference to column A (name of funding agency) select the data you would like to update and type the new value.

3.2 To update the Planned Future Investment Data
click the tab of *(P) Future Invest* sheet.

- *Project Name:* move mouse pointer to column A. Starting at the row below the column description, type the project identification.

- *Type of Project:* move mouse pointer to column B. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Phase of Project:* move mouse pointer to column C. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Project Location:* move mouse pointer to column D. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Implementing Agency:* move mouse pointer to column E. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Start Date of Project:* move mouse pointer to column F. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Completion Date of the Project:* move mouse pointer to column G. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Accomplishment Status (%):* move mouse pointer to column H. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Number of Household Covered by the Project:* move mouse pointer to column I. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Finance Agency:* move mouse pointer to column J. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Cost of Level I Facility (Thousand of pesos):* move mouse pointer to column K. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Cost of Level II System (Thousand of pesos):* move mouse pointer to column L. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Cost of Level III System (Thousand of pesos):* move mouse pointer to column M. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Cost of Sewer System (Thousand of pesos):* move mouse pointer to column N. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Private Latrine (Thousand of pesos):* move mouse pointer to column O. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Cost School Toilets (Thousand of pesos):* move mouse pointer to column P. Starting at the row below the column description, in reference to column A (name of project) type the new value.

- *Cost of Public Toilets (Thousand of pesos):* move mouse pointer to column Q. Starting at the row below the column description, in reference to column A (name of project) type the new value.

8.8. Updating Key Parameter Data Base

1. Click the File menu, select Open.
   Short-cut: Click the Open button.
2. From the Open Dialog Box. Select the *keypar.xls* filename.
3. To update the Key Parameter Data,
   click the tab of *STable 2.6.2* sheet.

Water Supply:
- *Number of Household to be Served by Level I Facility:* move mouse pointer to column H-Row 5. Type the new value.

- *Water Consumption Rate for Level III System:* move mouse pointer to column H-Row 6. Type the new value.

Sanitation:
- *Standard Number of Student to be Served by a Unit of Sanitary Toilet:* move mouse pointer to column H-Row 8. Type the new value.

- *Standard Number of Toilets for Public Facility:* move mouse pointer to column H-Row 9. Type the new value.

Medium-term Plan:
- *Percentage of Population Covered by Urban Water Supply:* move mouse pointer to column H-Row 11. Type the new value.

- *Percentage of Population Covered by Rural Water Supply:* move mouse pointer to column H-Row 12. Type the new value.

- *Percentage of Population Covered by Sanitary Toilet:* move mouse pointer to column H-Row 14. Type the new value.

- *Percentage of Urban Household Covered by Flush Toilet:* move mouse pointer to column H-Row 16. Type the new value.

- *Percentage of Urban Household Covered by Pour Flush Toilet:* move mouse pointer to column H-Row 17. Type the new value.

- *Percentage of Urban Household Covered by VIP Latrine:* move mouse pointer to column H-Row 18. Type the new value.

- *Percentage of Rural Household Covered by Flush Toilet:* move mouse pointer to column H-Row 20. Type the new value.

- *Percentage of Rural Household Covered by Pour Flush Toilet:* move mouse pointer to column H-Row 21. Type the new value.

- *Percentage of Rural Household Covered by VIP Latrine:* move mouse pointer to column H-Row 22. Type the new value.

- *Percentage of Public Student Covered by School Toilet:* move mouse pointer to column H-Row 23. Type the new value.

- *Percentage of Public Utility Covered by Public Toilet:* move mouse pointer to column H-Row 24. Type the new value.

- *Percentage of Population Covered by Solid Waste Collection:* move mouse pointer to column H-Row 25. Type the new value.

Long-term Plan:
- *Percentage of Population Covered by Urban Water Supply:* move mouse pointer to column H-Row 27. Type the new value.

- *Percentage of Population Covered by Rural Water Supply:* move mouse pointer to column H-Row 28. Type the new value.

- *Percentage of Population Covered by Sanitary Toilet:* move mouse pointer to column H-Row 30. Type the new value.

- *Percentage of Urban Household Covered by Flush Toilet:* move mouse pointer to column H-Row 32. Type the new value.

- *Percentage of Urban Household Covered by Pour Flush Toilet:* move mouse pointer to column H-Row 33. Type the new value.

- *Percentage of Urban Household Covered by VIP Latrine:* move mouse pointer to column H-Row 34. Type the new value.

- *Percentage of Rural Household Covered by Flush Toilet:* move mouse pointer to column H-Row 36. Type the new value.

- *Percentage of Rural Household Covered by Pour Flush Toilet:* move mouse pointer to column H-Row 37. Type the new value.

- *Percentage of Rural Household Covered by VIP Latrine:* move mouse pointer to column H-Row 38. Type the new value.

- *Percentage of Public Student Covered by School Toilet:* move mouse pointer to column H-Row 39. Type the new value.

- *Percentage of Public Utility Covered by Public Toilet:* move mouse pointer to column H-Row 40. Type the new value.

- *Percentage of Population Covered by Urban Sewerage:* move mouse pointer to column H-Row 41. Type the new value.

Rehabilitation:

- *Percentage of Level I Wells for Rehabilitation:* move mouse pointer to column H-Row 42. Type the new value.

Sector Management Cost:

- *Percentage of Feasibility and Detail Design:* move mouse pointer to column H-Row 44. Type the new value.

- *Percentage of Construction Supervision:* move mouse pointer to column H-Row 45. Type the new value.

Contingencies:

- *Percentage of Physical Contingency:* move mouse pointer to column H-Row 47. Type the new value.

- *Percentage of Price Contingency:* move mouse pointer to column H-Row 48. Type the new value.

Community Development and Training Cost:

- *Percentage for Level III System:* move mouse pointer to column H-Row 50. Type the new value.

- *Percentage for Level I Facility and Level II System:* move mouse pointer to column H-Row 51. Type the new value.

Recurrent Cost:

- *Operating Cost for Level III System:* move mouse pointer to column H-Row 52. Type the new value.

- *Cost of Spare Parts/Equipment for Level III System:* move mouse pointer to column H-Row 53. Type the new value.

- *Cost of Spare Parts/Equipment for Level II System:* move mouse pointer to column H-Row 54. Type the new value.

- *Cost of Spare Parts/Equipment for Level I Facility:* move mouse pointer to column H-Row 55. Type the new value.

- *Public School Toilet Maintenance Cost:* move mouse pointer to column H-Row 56. Type the new value.

- *Public Utility Toilet Maintenance Cost:* move mouse pointer to column H-Row 57. Type the new value.

Allocation Factors/Percentages of IRA:

- *Percentage Share from Provincial IRA:* move mouse pointer to column H-Row 59. Type the new value.

- *Percentage Share from Municipal/Barangay IRA:* move mouse pointer to column H-Row 60. Type the new value.

Funding Levels/Percentages for Different Financing Scenarios:

- *1st Scenario:* move mouse pointer to column H-Row 62. Type the new value.

- *2nd Scenario:* move mouse pointer to column H-Row 63. Type the new value.

- *3rd Scenario:* move mouse pointer to column H-Row 64. Type the new value.

- *4th Scenario:* move mouse pointer to column H-Row 65. Type the new value.

- *5th Scenario:* move mouse pointer to column H-Row 66. Type the new value.

click the tab of *STable 2.6.3* sheet:

- *Percentage Proportion of Water Source:* move mouse pointer to column D. Starting at the row below the column description, in reference to column A (name of municipality), column B (type of area), column C (type of source) select the data you would like to update and type the new value.

- *Range Depth of Well:* move mouse pointer to column E. Starting at the row below the column description, in reference to column A (name of municipality), column B (type of area), column C (type of source) select the data you would like to update and type the new value.

- *Average Specific Capacity:* move mouse pointer to column F. Starting at the row below the column description, in reference to column A (name of municipality), column B (type of area), column C (type of source) select the data you would like to update and type the new value.

click the tab of *STable 2.6.5* sheet.

- *Unsafe Percentage:* move mouse pointer to column C. Starting at the row below the column description, in reference to column A (name of municipality) select the data you would like to update and type the new value.

click the tab of *STable 2.6.6* sheet.

- *Unit Construction Cost for New Level III System for 5,000 population:* move mouse pointer to column B-Row 7. Type the new value.

- *Unit Construction Cost for New Level III System for 10,000 population:* move mouse pointer to column B-Row 8. Type the new value.

- *Unit Construction Cost for New Level III System for 15,000 population:* move mouse pointer to column B-Row 9. Type the new value.

- *Unit Construction Cost for Level III System Expansion for 5,000 population:* move mouse pointer to column B-Row 11. Type the new value.

- *Unit Construction Cost for Level III System Expansion for 10,000 population:* move mouse pointer to column B-Row 12. Type the new value.

- *Unit Construction Cost for Level III System Expansion for 15,000 population:* move mouse pointer to column B-Row 13. Type the new value.

- *Unit Construction Cost for Level II System:* move mouse pointer to column B-Row 14. Type the new value.

- *Unit Construction Cost for Level I Facility (Deep Eell - 40 meter depth):* move mouse pointer to column B-Row 16. Type the new value.

- *Unit Construction Cost for Level I Facility (Deep Well - 80 meter depth):* move mouse pointer to column B-Row 17. Type the new value.

- *Unit Construction Cost for Level I Facility (Deep Well - 120 meter depth):* move mouse pointer to column B-Row 18. Type the new value.

- *Unit Construction Cost for Level I Facility (Shallow Well):* move mouse pointer to column B-Row 19. Type the new value.

- *Unit Construction Cost for Rehabilitation of Level I Facility:* move mouse pointer to column B-Row 20. Type the new value.

- *Cost for Disinfection of Level I Wells:* move mouse pointer to column B-Row 21. Type the new value.

- *Unit Construction Cost for Flush Toilet:* move mouse pointer to column B-Row 22. Type the new value.

- *Unit Construction Cost for Pour Flush Toilet:* move mouse pointer to column B-Row 23. Type the new value.

- *Unit Construction Cost for VIP Latrine Toilet:* move mouse pointer to column B-Row 24. Type the new value.

- *Unit Construction Cost for School Toilet:* move mouse pointer to column B-Row 25. Type the new value.

- *Unit Construction Cost for Public Toilet:* move mouse pointer to column B-Row 26. Type the new value.

- *Unit Construction Cost for Urban Sewerage:* move mouse pointer to column B-Row 27. Type the new value.

click the tab of *STable 2.6.4* sheet.

Urban Water Supply (Level III System):

- *Feasibility Study and Detail Design:* move mouse pointer to Row 6. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Construction and Supervision:* move mouse pointer to Row 7. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Community Development and Training:* move mouse pointer to Row 8. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

Rural Water Supply (Level I Facility):

- *Detail Design:* move mouse pointer to Row 10. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Construction and Supervision:* move mouse pointer to Row 11. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Community Development and Training:* move mouse pointer to Row 12. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

Rural Water Supply (Level II System):

- *Detail Design:* move mouse pointer to Row 14. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Construction and Supervision:* move mouse pointer to Row 15. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Community Development and Training:* move mouse pointer to Row 16. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

Sanitation:

- *Urban Household Toilet:* move mouse pointer to Row 17. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Rural Household Toilet:* move mouse pointer to Row 18. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Public School Toilet:* move mouse pointer to Row 19. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Public Toilet:* move mouse pointer to Row 20. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Disinfection of Level I Wells:* move mouse pointer to Row 21. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Detail Design:* move mouse pointer to Row 22. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Construction and Supervision:* move mouse pointer to Row 23. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

- *Community Development and Training:* move mouse pointer to Row 24. Starting at Column F (Year 1996) up to Column J (Year 2000) select the data you would like to update and type the new value.

click the tab of *STable 2.6.7 & 2.6.8* sheet.

Scoring Factor for Municipal Investment Ranking for Urban Water Supply:

- *Minimum Percentage of Underserved and Unserved Population in Base Year:* move mouse pointer to column B, in reference to column A (score) select the data you would like to update and type the new value.

- *Maximum Percentage of Underserved and Unserved Population in Base Year:* move mouse pointer to column D, in reference to column A (score) select the data you would like to update and type the new value.

- *Weight Allocation Score for Underserved and Unserved Population in Base Year:* move mouse pointer to column C-Row 9. Type the new value.

- *Minimum Percentage of Underserved and Unserved Population in Phase I:* move mouse pointer to column E, in reference to column A (score) select the data you would like to update and type the new value.

- *Maximu Percentage of Underserved and Unserved Population in Phase I:* move mouse pointer to column G, in reference to column A (score) select the data you would like to update and type the new value.

- *Weight allocation Score for Underserved and Unserved Population in Phase I:* move mouse pointer to column F-Row 9. Type the new value.

- *Minimum Percentage of Underserved and Unserved by Level III System in the Base Year:* move mouse pointer to column H, in reference to column A (score) select the data you would like to update and type the new value.

- *Maximum Percentage of of Underserved and Unserved by Level III System in the Base Year:* move mouse pointer to column J, in reference to column A (score) select the data you would like to update and type the new value.

- *Weight Allocation Score for Underserved and Unserved by Level III System in the Base Year:* move mouse pointer to column I-Row 9. Type the new value.

Scoring Factor for Municipal Comprehensive Investment Ranking:

- *Minimum Percentage of Rural Water Supply:* move mouse pointer to column E, in reference to column A (score) at starting at row 15, select the data you would like to update and type the new value.

- *Maximum Percentage of Rural Water Supply:* move mouse pointer to column G, in reference to column A (score) at starting at row 15, select the data you would like to update and type the new value.

- *Weight Allocation Score for Rural Water Supply:* move mouse pointer to column F-Row 20. Type the new value.

- *Minimum Percentage of Urban Sanitation:* move mouse pointer to column H, in reference to column A (score) at starting at row 15, select the data you would like to update and type the new value.

- *Maximum Percentage of Urban Sanitation:* move mouse pointer to column J, in reference to column A (score) at starting at row 15, select the data you would like to update and type the new value.

- *Weight Allocation Score for Urban Sanitation:* move mouse pointer to column I-Row 20. Type the new value.

- *Minimum Percentage of Rural Sanitation:* move mouse pointer to column K, in reference to column A (score) at starting at row 15, select the data you would like to update and type the new value.

- *Maximum Percentage of Rural Sanitation:* move mouse pointer to column M, in reference to column A (score) at starting at row 15, select the data you would like to update and type the new value.

- *Weight Allocation Score for Rural Sanitation:* move mouse pointer to column L-Row 20. Type the new value.

8.9.   Updating Unit Construction Cost Data Base

8.9.1.   Water Supply

1. Click the File menu, select Open.
   Short-cut: Click the Open button.
2. From the Open Dialog Box. Select the *chap-10.xls* filename.
3.1. To update the Unit Cost for Level III (5,000 population),
   click the tab of *STable 10.2.7* sheet.

- *Quantity:* move mouse pointer to column C. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

3.2. To update the Unit Cost for Level III (10,000 population),

   click the tab of *STable 10.2.8* sheet.

- *Quantity:* move mouse pointer to column C. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

3.3. To update the Unit Cost for Level III (15,000 population),
   click the tab of *STable 10.2.9* sheet.

- *Quantity:* move mouse pointer to column C. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost*: move mouse pointer to column E. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

3.4.To update the **Unit Cost for Level II (600 population)**, click the tab of *STable 10.2.6* sheet.

- *Lump Cost of Spring Box*: move mouse pointer to column G-Row-4. Type the new value.

- *Quantity of Installation of Pipelines and Fittings*: move mouse pointer to column D. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost of Installation of Pipelines and Fittings*: move mouse pointer to column F. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

3.5.To update the **Unit Cost for Level I (Deep Well - 40 m depth)**, click the tab of *STable 10.2.1* sheet.

- *Lump Sum Cost of Mobilization/Demobilization*: move mouse pointer to column F-Row-4. Type the new value.

- *Quantity*: move mouse pointer to column C. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost*: move mouse pointer to column E. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

3.6.To update the **Unit Cost for Level I (Deep Well - 80 m depth)**, click the tab of *STable 10.2.2* sheet.

- *Lump Sum Cost of Mobilization/Demobilization*: move mouse pointer to column F-Row-4. Type the new value.

- *Quantity*: move mouse pointer to column C. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost*: move mouse pointer to column E. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

3.7.To update the **Unit Cost for Level I (Deep Well - 120 m depth)**, click the tab of *STable 10.2.3* sheet.

- *Lump Sum Cost of Mobilization/Demobilization*: move mouse pointer to column F-Row-4. Type the new value.

- *Quantity*: move mouse pointer to column C. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

3.8. To update the Unit Cost for Level I (Deep Well Rehabilitation), click the tab of *STable 10.2.4* sheet.

- *Lump Sum Cost of Mobilization/Demobilization:* move mouse pointer to column F-Row-4. Type the new value.

- *Quantity:* move mouse pointer to column C. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

3.9. To update the Unit Cost for Level I (Shallow Well - 18 m depth), click the tab of *STable 10.2.5* sheet.

- *Lump Sum Cost of Mobilization/Demobilization:* move mouse pointer to column F-Row-4. Type the new value.

- *Quantity:* move mouse pointer to column C. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

8.9.2. Environmental Sanitation

1. Click the File menu, select Open.
   Short-cut: Click the Open button.
2. From the Open Dialog Box. Select the *chap-10.xls* filename.
3.1. To update the Unit Cost of Flush Water Sealed Toilet with Septic click the tab of *STable 10.2.10* sheet.

- *Quantity:* move mouse pointer to column C. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost:* move mouse pointer to column E. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

3.2. To update the Unit Cost of Pour Flush Toilet with Double Pit Latrine click the tab of *STable 10.2.11* sheet.

- *Quantity:* move mouse pointer to column C. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

- *Unit Cost*: move mouse pointer to column E. Starting at the row below the column description, in reference to column B (item description) select the data you would like to update and type the new value.

3.3. To update the **Unit Cost** of **Ventilated Improved Pit Latrine (VIP)**
click the tab of *STable 10.2.12* sheet.

- *Quantity:* move mouse pointer to column D. Starting at the row below the column description, in reference to column C (item description) select the data you would like to update and type the new value.

- *Unit Cost:* move mouse pointer to column H. Starting at the row below the column description, in reference to column C (item description) select the data you would like to update and type the new value.

3.4. To update the **Unit Cost** of **School Toilet**
click the tab of *STable 10.2.13* sheet.

- *Quantity:* move mouse pointer to column D. Starting at the row below the column description, in reference to column C (item description) select the data you would like to update and type the new value.

- *Unit Cost:* move mouse pointer to column H. Starting at the row below the column description, in reference to column C (item description) select the data you would like to update and type the new value.

3.5. To update the **Unit Cost** of **Public Toilet**
click the tab of *STable 10.2.14* sheet.

- *Quantity:* move mouse pointer to column D. Starting at the row below the column description, in reference to column C (item description) select the data you would like to update and type the new value.

- *Unit Cost:* move mouse pointer to column H. Starting at the row below the column description, in reference to column C (item description) select the data you would like to update and type the new value.

9. **Standard Report Format**

The following page describes the standard report format. Please refer to MS-Word Basic Operation in Section 5 for procedure in setting the MS-Word environment.

Specification for Standard Report Format

Edge of paper. ← ········· *Title of section* ········ ⁄

4.   EXISTING FACILITIES AND SERVICE COVERAGE←⁄

4.1.   Water Supply ←· ····⁄··· *Sub-section*

Text box ·· ──── ·→

4.2.   General←· ····⁄

All around margin - 1" ········→

This is an example output of the main text.

┌───── *Spacing between paragrpah - 1 blank line.*

Type and composition of water supply facilities are classified into three service levels based on the definition given in the National Sector Master Plan and presented in Table 4.1.1. Various types of Level I Facilities/sources defined to safe and unsafe sources by DOH. This classification adopted for preparation of PW4SP does not disregard the facts that the existing improved/covered dug well is sometimes yielding non-potable water.

←· ·····→ |─── *1st indent - 0.5"*

(1) Problem areas

|←→|──────── *2nd indent - 0.25"*

Problem areas are identified through review of the exsiting water supply facilities and countermeasures and recommendations for their improvement are prepared to reflect on the future planning in PW4SP.

1) Level I facilities

Comments on each sub-title shall be followed in the manner as shown herewith.

── *Line spacing - 1.5 line.*

a. Driven shallow wells

Most of driven shallow wells are exposed to danger of pollution through seepage of surface water.

── *3rd indent - 0.25"*

── *4th indent - 0.25"*

Standard settings;

Standard Font - New Roman Times.
Font Size   - 11 points.
Paragraph   - Justified alignment.
Title of Section - Bold Font, All Upper Case.
Sub-Section   - Bold Font, First Letter Upper Case.

········· *All around margin - 1"*

Key Parameter

No.	Description of Key Parameter			Unit	Values
1.	Service Level	**Water Supply**			
		Number of household to be served by Level I Facility	HH/Well	
		Water Consumption Rate for Level III System	Liter/capita/day	
		Sanitation			
		Std. number of student to be served by a unit of sanitary toilet	Student/Toilet	
		Standard number of toilets for a public utility	Toilet/Public Facility	
2.	Provincial Sector Target	Medium Term Plan	**Water Supply**		
			UrbanWater Supply	% of Population	
			Rural Water Supply	% of Population	
			Sanitation		
			Household Toilet	% of Household	
			Urban Household Toilet		
			Flush	% of Household	
			Pour Flush	% of Household	
			VIP Latrine	% of Household	
			Rural Household Toilet		
			Flush	% of Household	
			Pour Flush	% of Household	
			VIP Latrine	% of Household	
			School Toilet	% of Public Student	
			Public Toilet	% of Public Utility	
			Solid Waste	% of Population	
		Long Term Plan	**Water Supply**		
			UrbanWater Supply	% of Population	
			Rural Water Supply	% of Population	
			Sanitation		
			Household Toilet	% of Household	
			Urban Household Toilet		
			Flush	% of Household	
			Pour Flush	% of Household	
			VIP Latrine	% of Household	
			Rural Household Toilet		
			Flush	% of Household	
			Pour Flush	% of Household	
			VIP Latrine	% of Household	
			School Toilet	% of Public Student	
			Public Toilet	% of Public Utility	
			Urban Sewerage	% of Urban Population	
3.	Percentage of Level I Wells for Rehabilitation			%	
4.	Percentage of Sector Management Cost to Construction Cost				
	Feasibility and Detail Design			% of Construction Cost	
	Construction Supervision			% of Construction Cost	
5.	Contingencies				
	Physical Contingency			% of Construction Cost	
	Price Contingency			Percent per annum	
6.	Community Development and Training Cost				
	Level III			% of Construction Cost	
	Levels I and II			% of Construction Cost	
7.	Recurrent Cost	Level III System (Operating Cost)		Pesos/HH/year	
		Level III System (Spare Parts/Equipment)		% of Construction Cost	
		Level II System (Spare Parts/Equipment)		Pesos/HH/year	
		Level I System (Spare Parts/Equipment)		Pesos/HH/year	
		Public School Toilet Maintenance Cost		Pesos/Toilet/year	
		Public Utility Toilet Maintenance Cost		Pesos/Toilet/year	
8.	Allocation factors/Percentages of IRA				
	From Provincial			%	
	From Municipality and Brgy.			%	
9.	Funding Levels/Percenatges for Different Financing Scenarios				
	1st Scenario			% Funding Available	
	2nd Scenario			% Funding Available	
	3rd Scenario			% Funding Available	
	4th Scenario			% Funding Available	
	5th Scenario			% Funding Available	

Composition of Well Sources and Specific Capacity

Municipality	Area	Source	Proportion (%)	Standard Specification		
				Depth (m)	SWL (m)	Specific Capacity (lit/sec/m)
	Rural	Shallow Well				
		Deep Well				
	Urban	Shallow Well				
		Deep Well				
	Rural	Shallow Well				
		Deep Well				
	Urban	Shallow Well				
		Deep Well				
	Rural	Shallow Well				
		Deep Well				
	Urban	Shallow Well				
		Deep Well				
	Rural	Shallow Well				
		Deep Well				
	Urban	Shallow Well				
		Deep Well				
	Rural	Shallow Well				
		Deep Well				
	Urban	Shallow Well				
		Deep Well				
	Rural	Shallow Well				
		Deep Well				
	Urban	Shallow Well				
		Deep Well				
	Rural	Shallow Well				
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	Urban	Shallow Well				
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	Rural	Shallow Well				
		Deep Well				
	Urban	Shallow Well				
		Deep Well				
	Rural	Shallow Well				
		Deep Well				
	Urban	Shallow Well				
		Deep Well				
	Rural	Shallow Well				
		Deep Well				
	Urban	Shallow Well				
		Deep Well				
	Rural	Shallow Well				
		Deep Well				
	Urban	Shallow Well				
		Deep Well				

Annual Distribution of Investment Cost Required by Sub-sector
for Medium-term Development Plan

Unit: Percent

Sub-Sector	Component	1996	1997	1998	1999	2000	Total
Urban Water Supply	**Level III System**						
	Feasibility Study and Detail Design						
	Construction & Supervision						
	Community Development & Training						
Rural Water Supply	**Level I Facility**						
	Detail Design						
	Construction & Supervision						
	Community Development & Training						
	Level II System						
	Detail Design						
	Construction & Supervision						
	Community Development & Training						
Sanitation	Urban Household Toilet						
	Rural Household Toilet						
	Public School Toilet						
	Public Toilet						
	Disinfection of Level I Wells						
	Detail Design						
	Construction & Supervision						
	Community Development & Training						

Level I Safe and Unsafe Percentage

Municipality	Safe Source (%)	Unsafe Source (%)
Provincial Average		

Unit Construction Cost of Different Facilities

Description	Unit Construction Cost (Pesos)	Service Coverage		Unit Cost	
		Served Population	Served Household	Pesos/ Person	Pesos/ Household
Water Supply					
Level III - New System					
For 5000 Population					
For 10000 Population					
For 15000 Population					
Level III - Expansion					
For 5000 Population					
For 10000 Population					
For 15000 Population					
Level II					
Level I					
Deep Well - 30 meter depth					
Deep Well - 50 meter depth					
Deep Well - 70 meter depth					
Shallow Well					
Spring Development					
Rehabilitation Cost for Level I Deep Well					
Disinfection of Level I Wells					
Sanitation					
Flush					
Pour Flush					
VIP Latrine					
School Toilet					
Public Toilet					
Urban Sewerage					

Scoring Factor for Municipal Investment Ranking for Urban Water Supply

Score	Underserved and Unserved Population in Base Year	Underserved and Unserved Population in Phase I	Population Unserved by Level III Systems in Base Year
1.0	< %	< %	< %
0.8	< % <	< % <	< % <
0.6	< % <	< % <	< % <
0.4	< % <	< %	< % <
0.2	% <	% <	% <
Weight Allocation Score			

Scoring Factor for Municipal Comprehensive Investment Ranking

Score	Urban Water Supply	Rural Water Supply	Urban Sanitation	Rural Sanitation
1.0	N.A.	< %	< %	< %
0.8	N.A.	< % <	< % <	< % <
0.6	N.A.	< % <	< % <	< % <
0.4	N.A.	< % <	< % <	< % <
0.2	N.A.	% <	% <	% <
Weight Allocation Score				

3. PROVINCIAL PROFILE
3.2 Natural Conditions and Geographical Features
3.2.3 Topography and Drainage

Table 3.2.1 Flow Data of Major Rivers

RIVER = ABRA RIVER
STA ID = 01SW173202PW004
AGENCY = BPW-DPWH, BRS

LOCATION = BANAOANG, BANTAY, ILOCOS SUR
LATITUDE = 17 33 20
LONGITUDE = 120 28 30

DRAINAGE AREA (SQ KM) = 4,813
GAGE TYPE = NR
START OBSERVATION = NOV 1958
OBS LAST CONSIDERED = NOV 1977

ELEV OF Z GAGE = 3.16 M. ABOVE MSL
GAGE OPERATION = STAFF GAGE READS 3X A DAY
STATUS = NON-OPERATIONAL
REMARKS = RECORDS ARE FAIR

A. ANNUAL DISCHARGE CHARACTERISTICS (Q IN CU M/SEC)

YEAR	PEAK Q	GAGE HT. (METERS)	DATE	TIME	MAX DLY Q	MEAN Q	MIN DLY Q	GAGE HT (METERS)	DATE	RUNOFF MM
1971	3023.00	6.00			*****	*****	133.60	2.26	DEC-21	*****
1972	4240.60	7.08	JUL-27		4191.80	431.54	51.80	1.96	APR-24	2835.3
1973	3880.00	7.00	OCT-17	12NN	2326.00	218.60	36.70	1.82	APR-28	1432.3
1974	4200.00	7.20	OCT-12	12NN	1830.00	*****	40.90	2.16	APR-01	*****
1975	872.00	4.36	SEP-01	06AM	795.00	131.01	37.50	1.90	APR-27	859.8
1976	4753.00	7.50	JUL-01	12NN	4408.00	179.97	36.70	1.82	APR-28	*****
1977	4040.00	7.10	SEP-19	06PM	3944.00	*****	37.50	1.90	APR-21	*****

C. MEAN MONTHLY DISCHARGE IN CU M/SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1971	352.00	281.69	288.49	203.03	160.90	293.77	1027.20	526.09	436.82	953.18	*****	185.30
1972	166.98	112.78	85.78	59.91	118.81	323.73	2249.60	1034.70	316.70	270.65	222.70	169.74
1973	41.29	39.94	38.53	37.32	43.51	51.59	83.81	265.31	433.60	1026.50	416.07	130.45
1974	44.52	*****	*****	43.61	46.95	305.47	60.85	596.95	620.53	*****	*****	*****
1975	192.49	39.01	39.19	38.09	45.40	134.83	78.47	73.58	494.30	350.97	43.61	41.82
1976	41.30	39.92	38.52	37.28	560.10	192.38	574.45	241.68	208.30	105.02	51.36	52.82
1977	43.20	40.59	39.34	37.99	59.62	140.35	202.22	690.71	1099.60	42.68	45.31	*****

***** INDICATES MISSING DATA, NOT INCLUDED IN CALCULATION OF STATISTICAL PARAMETERS

RIVER = STA. MARIA RIVER
STA ID = 01SW171203PW009
AGENCY = BPW-DPWH, BRS

LOCATION = NO. 2 SABANGAN-PINGAN, BURGOS, ILOCOS SUR
LATITUDE = 17 16 27
LONGITUDE = 120 31 14

DRAINAGE AREA (SQ KM) = 123
GAGE TYPE = NR
START OBSERVATION = FEB 1957
OBS LAST CONSIDERED = SEP 1977

ELEV OF Z GAGE = 17.29 M. ABOVE MSL
GAGE OPERATION = STAFF GAGE READS 3X A DAY
STATUS = NON-OPERATIONAL
REMARKS = RECORDS ARE FAIR

A. ANNUAL DISCHARGE CHARACTERISTICS (Q IN CU M/SEC)

YEAR	PEAK Q	GAGE HT. (METERS)	DATE	TIME	MAX DLY Q	MEAN Q	MIN DLY Q	GAGE HT (METERS)	DATE	RUNOFF MM
1971	11.00	1.20	JUN-18		9.60	0.56	0.01	0.34	APR-	142.4
1972	•••••	•••••	.		•••••	•••••	•••••	•••••	.	•••••
1973	45.00	1.80	OCT-08	06AM	43.70	2.06	0.01	0.20	MAR-	52.9
1974	4.65	0.90	FEB-01	05PM	43.05	•••••	0.01	0.10	JAN-26	•••••
1975	12.50	1.20	AUG-17	06AM	12.18	•••••	0.02	0.19	MAY-26	•••••
1976	•••••	•••••	.		•••••	•••••	•••••	•••••	.	•••••
1977	47.25	1.83	SEP-19	06AM	43.70	•••••	0.53	0.54	SEP-05	•••••

C. MEAN MONTHLY DISCHARGE IN CU M/SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1971	0.06	0.03	0.02	0.01	0.01	1.47	1.03	2.61	0.43	0.32	0.55	0.08
1972	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
1973	0.05	0.04	0.02	0.01	0.01	0.02	0.18	2.49	9.29	7.60	3.35	1.64
1974	0.76	3.94	2.39	1.02	0.35	•••••	•••••	•••••	•••••	7.58	3.35	•••••
1975	•••••	•••••	•••••	0.03	0.02	0.43	0.48	4.56	•••••	•••••	•••••	•••••
1976	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
1977	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	4.84	•••••	•••••	•••••

••••• INDICATES MISSING DATA, NOT INCLUDED IN CALCULATION OF STATISTICAL PARAMETERS

RIVER · BUCONG RIVER
STA ID · 01SW171202PW010
AGENCY · BPW-DPWH, BRS

LOCATION · SALVADOR, CANDON, ILOCOS SUR
LATITUDE · 17 13 50
LONGITUDE · 120 28 50

DRAINAGE AREA (SQ KM) · 49
GAGE TYPE · NR
START OBSERVATION · APR 1950
OBS LAST CONSIDERED · DEC 1977

ELEV OF Z GAGE · 12.04 M. ABOVE MSL
GAGE OPERATION · STAFF GAGE READS 3X A DAY
STATUS · NON-OPERATIONAL
REMARKS · RECORDS ARE FAIR

A. ANNUAL DISCHARGE CHARACTERISTICS (Q IN CU M/SEC)

YEAR	PEAK Q	GAGE HT. (METERS)	DATE	TIME	MAX DLY Q	MEAN Q	MIN DLY Q	GAGE HT (METERS)	DATE	RUNOFF MM
1971	205.60	3.46	JUL-24		70.00	1.38	0.03	0.68	APR-29	891.2
1972	•••••	•••••			•••••	•••••	•••••	•••••		•••••
1973	2.66	1.87	SEP-19	06PM	0.47	•••••	0.00	0.48	FEB-28	•••••
1974	9.24	2.02	AUG-26	06AM	9.24	0.21	0.00	0.50	JAN-26	138.2
1975	128.25	2.95	AUG-28	07AM	118.50	2.33	0.00	0.24	JAN-	1497.8
1976	139.40	3.01	AUG-12	06AM	103.70	0.74	0.00	0.26	APR-29	47.3
1977	16.70	2.12	AUG-23	06AM	5.50	0.05	0.00	0.37	APR-29	3.2

C. MEAN MONTHLY DISCHARGE IN CU M/SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1971	0.11	0.12	0.05	0.03	0.03	0.85	7.76	4.16	0.96	1.77	0.27	0.26
1972	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
1973	•••••	•••••	•••••	•••••	•••••	•••••	•••••	0.01	0.09	0.01	0.00	•••••
1974	0.00	0.00	0.00	0.00	0.00	0.12	0.01	1.13	0.45	0.38	0.44	0.03
1975	0.00	0.00	0.00	0.00	0.00	0.00	0.01	24.34	2.38	0.48	0.26	0.01
1976	0.00	0.00	0.00	0.00	0.00	0.00	0.01	8.01	0.43	0.22	0.01	0.00
1977	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.51	0.04	0.01	0.00	0.00

••••• INDICATES MISSING DATA, NOT INCLUDED IN CALCULATION OF STATISTICAL PARAMETERS

RIVER ▪ BUAYA RIVER
STA ID ▪ 01SW170203PW011
AGENCY ▪ BPW-DPWH, BRS

LOCATION ▪ PALALI SUR, STA. LUCIA, ILOCOS SUR
LATITUDE ▪ 17 06 42
LONGITUDE ▪ 120 30 18

DRAINAGE AREA (SQ KM) ▪ 195
GAGE TYPE ▪ NR
START OBSERVATION ▪ MAY 1948
OBS LAST CONSIDERED ▪ NOV 1980

ELEV OF Z GAGE ▪ 7.03 M. ABOVE MSL
GAGE OPERATION ▪ STAFF GAGE READS 3X A DAY
STATUS ▪ OPERATIONAL
REMARKS ▪ RECORDS ARE FAIR

A. ANNUAL DISCHARGE CHARACTERISTICS (Q IN CU M/SEC)

YEAR	PEAK Q	GAGE HT. (METERS)	DATE	TIME	MAX DLY Q	MEAN Q	MIN DLY Q	GAGE HT (METERS)	DATE	RUNOFF MM
1971	470.91	2.97	AUG-14		249.50	15.13	0.25	1.09	MAR-19	2446.6
1972	346.28	2.68	JUL-14		235.50	20.04	0.13	1.03	MAY-09	3250.0
1973	50.00	1.76	OCT-04	12NN	26.00	1.51	0.40	1.10	MAR-	244.6
1974	308.00	2.56	OCT-05	05PM	296.00	•••••	0.40	1.10	MAR-12	•••••
1975	145.00	2.10	JUN-22	06AM	107.30	4.46	0.40	1.10	MAY-20	721.7
1976	268.80	2.46	JUN-37	12NN	272.60	9.44	0.24	0.95	MAR-09	353.0
1977	693.00	3.40	SEP-22	06AM	516.11	11.03	0.42	1.11	DEC-01	178.4
1978	0.47	1.14	MAY-18	06AM	0.47	•••••	0.40	1.10	JAN-	•••••
1979	246.00	2.40	JUL-04	06AM •	199.80	5.80	0.42	1.11	JAN-	93.8
1980	364.00	2.70	NOV-07	06AM	235.20	•••••	0.40	1.10	MAR-	•••••

B. EXTREMES OF DISCHARGE AND STATISTICAL PARAMETERS

EXTREME DISCHARGE IN CMS

MAX Q ▪ 693.00   MIN Q ▪ 0.13
DATE ▪ SEP 22, 1977   DATE ▪ MAY 09, 1972
GAGE H ▪ 3.40   GAGE H ▪ 1.03
INSTANTANEOUS PEAK

STATISTICS	PEAK Q	MAX DLY Q	MEAN Q	MIN DLY Q
MEAN FLW▪	289.246	213.848	9.630	0.346
STD DEV ▪	202.467	147.620	6.428	0.101
SKEWNESS ▪	0.010	-0.440	0.090	-1.600
KURTOSIS ▪	2.284	2.496	1.501	2.393
NO. YEARS ▪	10	10	7	10

C. MEAN MONTHLY DISCHARGE IN CU M/SECOND

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1971	0.41	0.37	0.35	0.38	0.38	7.08	42.87	63.08	34.24	25.36	4.66	0.47
1972	0.37	0.36	0.27	0.26	0.30	40.76	123.21	60.06	6.17	5.16	0.77	0.50
1973	0.58	0.46	0.41	0.51	0.49	0.68	0.79	3.19	1.03	8.86	0.51	0.43
1974	0.42	0.42	0.41	0.42	0.52	5.26	•••••	75.86	40.86	85.35	21.97	6.99
1975	0.58	0.48	0.44	0.43	0.42	23.74	12.95	4.15	5.93	2.36	1.29	0.81
1976	0.65	0.43	0.43	0.42	0.93	51.63	32.80	24.08	0.50	0.43	0.42	0.42
1977	0.42	0.42	0.41	0.40	3.10	4.12	2.26	34.50	77.51	8.51	0.52	0.42
1978	0.40	0.40	0.40	0.40	0.42	•••••	•••••	•••••	•••••	•••••	•••••	0.43
1979	0.42	0.45	0.42	0.42	1.19	0.95	19.75	41.27	1.58	0.76	0.63	0.56
1980	•••••	•••••	0.40	0.40	0.41	0.49	3.41	19.60	2.85	2.50	23.92	•••••
MEAN	0.47	0.42	0.39	0.40	0.81	14.96	29.75	36.19	18.96	15.47	6.07	1.22
ST DEV	0.10	0.04	0.05	0.06	0.85	19.26	40.68	26.05	26.68	27.30	9.66	2.16
SKEWSS	1.52	0.07	-198.96	69.29	1.36	1.24	2.14	4.11	2.04	1.64	1.73	1.04
KURTSS	1.48	1.56	3.95	4.02	5.25	1.93	3.56	1.36	2.73	4.80	2.16	5.59
NO. YRS	9	9	10	10	10	9	8	9	9	9	9	9

••••• INDICATES MISSING DATA, NOT INCLUDED IN CALCULATION OF STATISTICAL PARAMETERS

3.3 Socio-economic Conditions
3.3.2 Basic Infrastructure

Table 3.3.1 Number of Elementary School, High School and Other Served Facilities

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Services	Date:	Page: 1 of 1	Filename: socio.xls
Data Collection Level : Municipal	Prov. No. : 0129		Sheetname: (M) Services
Region Number: 01	Prov. Name: Ilocos Sur		Form Number: M 1.5

NEDA Geographic Code	Municipality	SERVICES									
		Elementary School			High School			College	Hospital	Public Market	Bank
		Public	Private	Total	Public	Private	Total				
012901	Alilem	13	0	13	1	0	1	0	0	0	0
012902	Banayoyo	6	0	6	1	0	1	0	0	0	0
012903	Bantay	18	0	18	0	1	1	0	1	0	1
012904	Burgos	9	0	9	1	1	2	0	0	0	0
012905	Cabugao	26	0	26	1	1	2	0	2	1	1
012906	Candon	24	2	26	4	1	5	1	2	1	9
012907	Caoayan	9	0	9	2	0	2	0	0	0	0
012908	Cervantes	17	1	18	1	1	2	0	1	1	0
012909	Galimuyod	8	0	8	1	1	2	0	0	0	1
012910	G. del Pilar	8	0	8	0	1	1	0	0	0	0
012911	Lidlidda	5	0	5	1	0	1	0	0	0	0
012912	Magsingal	17	0	17	1	2	3	0	1	1	1
012913	Nagbukel	8	0	8	1	0	1	0	0	0	0
012914	Narvacan	33	1	34	4	2	6	0	1	1	2
012915	Quirino	12	1	13	1	1	2	0	0	1	0
012916	Salcedo	15	0	15	2	1	3	0	1	1	0
012917	San Emilio	10	0	10	1	1	2	0	0	0	0
012918	San Esteban	4	0	4	1	1	2	0	0	0	1
012919	San Ildefonso	4	0	4	1	0	1	0	0	1	0
012920	San Juan	20	0	20	3	1	4	0	1	1	1
012921	San Vicente	5	0	5	0	1	1	0	1	1	1
012922	Santa	10	0	10	2	1	3	0	0	1	1
012923	Santa Catalina	6	0	6	1	1	2	0	0	0	1
012924	Santa Cruz	22	0	22	2	4	6	0	0	1	2
012925	Santa Lucia	14	0	14	3	2	5	0	1	1	1
012926	Santa Maria	19	0	19	1	1	2	2	1	1	1
012927	Santiago	11	0	11	1	2	3	0	0	1	1
012928	Santo Domingo	20	0	20	2	1	3	0	0	1	1
012929	Sigay	4	0	4	0	0	0	0	0	0	0
012930	Sinait	17	0	17	1	0	1	0	1	1	1
012931	Sugpon	8	0	8	1	0	1	0	0	0	0
012932	Suyo	18	0	18	1	0	1	0	0	0	1
012933	Tagudin	18	2	20	1	1	2	0	1	1	1
012934	Vigan (Capital)	17	2	19	1	3	4	2	8	1	11
	Provincial Total	**455**	**9**	**464**	**45**	**33**	**78**	**5**	**23**	**19**	**40**

3 - 5

3.5 Health Status
3.5.1 Morbidity, Mortality and Infant Mortality

Table 3.5.1 Morbidity, Mortality and Infant Mortality by Municipality (Annual incidence per 100,000 persons)

Content: Health - Morbidity and Mortality		Date:		Page Number 1 of 1	
Data Collection Level: Municipal		Region Number: 01		Filename: health.xls	
Prov. No.: 0129		Mun. Number: Not Applicable		Sheetname: (M) Morbidity and Mortality	
Prov. Name: Ilocos Sur		Mun. Name: Not Applicable		Form Number: M 3.1	

Cause Group Diseases of:	Disease No.	Name of Diseases (-Group)	Water Related Diseases	Number of Cases		
				Morbidity	Mortality	Infant Mortality
Infective and Parasitic (001-136)	A.01	2-4/ Typhoid/Parathyphoid	X	205	1	
	A.02	5-7/ Dysentary	X	21		
	A.03	8-10/ Intestinal Parasitism	X	300		
	A.04	11-13/ Diarrhea	X	5,369		
	A.05	14-16/ Tuberculosis		1,468	20	
	A.06	17-19/ Conjunctivities	X	91		
	A.07	20-22/ Whooping Cough		8		
	A.08	23-25/ Throat/Ear/Nose		27		
	A.09	26-28/ Tetanus		58	9	
	A.10	29-31/ Septicemia		2	2	
	A.11	32-34/ Cholera	X	12		
	A.12	35-37/ Varicella, Chickenpox		113		
	A.13	38-40/ Measles		124	2	
	A.14	41-43/ Dengue Fever	X	18		
	A.15	44-46/ Viral Hepatitis	X	52	1	
	A.16	47-49/ Malaria	X	19	2	
	A.17	50-52/ Schistosomiasis	X			
	A.18	53-55/ Filariasis	X	6		6
	A.19	56-58/ Venerial Diseases		1		
	A.20	59-61/ Other Bacter./ Viral Dis.		21		
Neoplasms (140-239)	B.01	62-64/ Malignant Neoplasms		40	36	
	B.02	65-67/ Leukemia		10	8	1
Endocrine, Nutritional & Metabolic (250-279)	C.01	68-70/ Diabetes Mellitus		22	4	
	C.02	71-73/ Nutritional Deficiencies		253	16	
	C.03	74-76/ Endocrine Disorder		20	2	
Blood & Blood Forming Organs (280-289)	D.01	77-79/ Anemias		290	6	
Mental Disorder (290-319)	E.01	Mental Disorder				
Nervous System & Sense Organs (320-389)	F.01	80-82/ Meningitis		13		
	F.02	83-85/ Nervous System		9		2
Circulatory Systems (390-459)	G.01	86-88/ Heart Diseases		1,243	41	
	G.02	89-91/ Vascular Diseases		162	11	1
Respiratory Systems (460-519)	H.01	92-94/ Bronchitis		3,802		
	H.02	95-97/ Pneumonia		1,405	34	
	H.03	98-100/ Influenza		3,124	2	
	H.04	101-103/ Obstructive Pulmonary		39	4	
	H.05	104-106/ ARI		71	2	
Digestive System (520-579)	I.01	107-109/ Appendicitis		69		
	I.02	110-112/ Gastroent. Colitis	X	75		
	I.03	113-115/ Chronic Liver Disease		16		
	I.04	116-118/ Other Diges. Diseases		20		
Genito-Urinary System (580-629)	J.01	119-121/ Kidney/ Nephritis		50		
	J.02	122-124/ Urinary Infections		293	4	
Complication of Pregnancy & the Puerperium (630-676)	K.01	125-127/ Prematurity		73		10
Skin & Subcutaneous Tissue (680-709)	L.01	128-130/ Skin Diseases	X	46		
	L.02	131-133/ Scabies	X	39		
Musculoskeletal & Connective Tissue (710-739)	M.01	134-136/ Arthrop., Rheumatism		166		
Congenital Anomalies (740-759)	N.01	137-139/ Congenital Anomalies		30		2
Certain Causes of Prenatal Morbidity and Mortality (760-779)	P.01	140-142/ Birth Trauma		11		1
	P.02	143-145/ Birth Injuries & Difficult Labor		30		2
	P.03	146-148/ Resp. Fetus/Newborn		51		38
	P.04	159-151/ Other Prenatal Causes		21		1
Symptoms &	Q.01	152-154/ Senility		0		
Accidents, Poisoning & Violence (800-999)	R.01	158-160/ Burns		36		
	R.02	161-163/ Suffoc. Foreign Body		9		
	R.03	164-166/ Other Accidents		187	24	

3.5.3 Health Facilities and Practitioners

Table 3.5.2 Number of Health Facilities and Practitioners by Municipality

Content: Health - Facility and Practitioner		Date:		Page No. 1 of 1		Filename: health.xls	
Data Collection Level: Municipal		Prov. No. : 0129			Shtname: (M)FacilityPractioner		
Region Number: 01		Prov. Name: Ilocos Sur				Form No. : M 3.2	

NEDA Geographic Code	Name	Number of Facilities			Number of Medical Practioners			
		Hospital	RHU	BHS	Doctors	Nurses	Midwives	Dentists
12901	Ahlem	0	1	3	1	1	3	0
12902	Banayoyo	0	1	3	1	1	2	1
12903	Bantay	1	1	5	9	2	13	4
12904	Burgos	0	1	2	1	1	5	2
12905	Cabugao	2	1	7	11	12	15	7
12906	Candon	2	1	9	24	8	18	15
12907	Caoayan	0	1	5	3	1	4	1
12908	Cervantes	1	1	8	3	8	6	1
12909	Galimuyod	0	1	4	1	1	5	2
12910	G. del Pilar	0	1	3	1	1	3	0
12911	Lidlidda	0	1	2	1	1	2	0
12912	Magsingal	1	1	5	5	8	15	6
12913	Nagbukel	0	1	2	1	1	2	0
12914	Narvacan	1	1	7	21	14	17	8
12915	Quirino	0	1	4	0	1	4	0
12916	Salcedo	1	1	3	3	4	4	1
12917	San Emilio	0	1	3	0	1	3	0
12918	San Esteban	0	1	3	2	1	8	1
12919	San Ildelfonso	0	1	3	1	1	13	0
12920	San Juan	1	1	5	10	4	14	1
12921	San Vicente	1	1	4	3	1	14	4
12922	Santa	0	1	4	3	1	6	0
12923	Santa Catalina	0	1	3	3	1	13	6
12924	Santa Cruz	0	1	6	4	1	13	3
12925	Santa Lucia	1	1	6	7	8	10	2
12926	Santa Maria	1	1	7	10	1	17	6
12927	Santiago	0	1	5	1	1	6	4
12928	Santo Domingo	0	1	5	16	1	15	7
12929	Sigay	0	1	2	1	0	3	0
12930	Sinait	1	1	6	5	12	16	6
12931	Sugpon	0	1	2	1	1	2	0
12932	Suyo	0	1	4	1	1	4	0
12933	Tagudin	1	1	6	9	15	7	3
12934	Vigan (Capital)	8	1	11	43	73	23	16
Provincial Total		23	34	157	206	189	305	107

3.6 Environmental Conditions
3.6.3 Solid Waste Disposal

Table 3.6.1 Municipal Solid Waste Collection and Disposal by Municipality

Content: Environment Sanitation - Municipal Solid Waste Collection and Disposal
Data Collection Level: Municipal
Region Number: 01 Prov. Name: Ilocos Sur Prov. No.: 0129 Date: Shtname: (M) SolidWaste Page No.: 1 of 1 Filename: sanit.xls Form No.: M 6.5

NEDA Geo-graphic Code	Municipality	With Municipal Service					Without Service		
		Number of Collections Trucks			Disposal		Number of Manner of Disposal		
		Open Dump Trucks	Closed Type Trucks	Total Units	No. of HHs Served by Open Dump Site	No. of HHs Served by Sanitary Landfill	Dumping (Land and Water)	Burying	Composting
012901	Alilem	0	0	0	0	0	803	235	
012902	Banayoyo	0	1	0	0	0	934	220	
012903	Bantay	0	0	1	0	0	2,203	3,064	
012904	Burgos	0	0	0	0	0	251	1,416	306
012905	Cabugao	0	0	1	0	0	3,293	1,891	536
012906	Candon	0	0	0	0	0	2,049	6,265	568
012907	Caoayan	0	0	0	0	0	1,456	1,783	
012908	Cervantes	0	0	0	0	0	1,878	721	
012909	Galimuyod	0	0	0	0	0	196	472	941
012910	G. del Pilar	0	0	0	0	0	660		0
012911	Lidlidda	0	0	0	0	0	367	319	78
012912	Magsingal	0	0	0	0	0	689	3,867	65
012913	Nagbukel	0	0	0	0	0	158	482	127
012914	Narvacan	0	0	0	0	0	868	6,268	207
012915	Quirino	0	0	0	0	0	495	513	393
012916	Salcedo	0	0	0	0	0	480	1,232	268
012917	San Emilio	0	0	0	0	0	927	39	216
012918	San Esteban	0	0	0	0	0	279	955	135
012919	San Ildefonso	0	0	0	0	0	410	473	68
012920	San Juan	0	0	0	0	0	2,669	1,526	124
012921	San Vicente	0	0	0	0	0	1,443	689	
012922	Santa	0	0	0	0	0	1,782	708	67
012923	Santa Catalina	0	0	0	0	0	458	1,806	
012924	Santa Cruz	0	0	0	0	0	2,279	3,150	540
012925	Santa Lucia	1	1	0	331	0	932	2,017	802
012926	Santa Maria	1	1	0	696	0	788	3,347	76
012927	Santiago	1	1	1	1,407	0	697	473	350
012928	Santo Domingo	0	0	0	0	0	324		3,958
012929	Sigay	0	0	0	0	0	115	126	120
012930	Sinait	0	0	0	0	0	2,788	1,792	231
012931	Sugpon	0	0	0	0	0	369	21	125
012932	Suyo	0	0	0	0	0	672	671	301
012933	Tagudin	1	1	4	2,330	529	1,328	4,411	159
012934	Vigan (Capital)	0	0	0	0	0	0	4,909	
	Provincial Total	7	7	1	4,764	529	35,040	55,861	10,761

4. EXISTING FACILITIES AND SERVICE COVERAGE
4.2 Sanitation and Sewerage
4.2.3 Sanitation Facilities and Service Coverage

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Environment Sanitation - Household Toilets
Data Collection Level: Municipal
Region Number: 01

Date:
Prov. No.: 0129
Prov. Name: Ilocos Sur

Page No.: 1 of 1
Filename: sant.xls
Shtname: (M) Household Toilets
Form No.: M 6.1

NEDA Geographic Code	Municipality	Number of Households Using Sanitary Toilet								Unsanitary Latrine			No. Facilities		
		Water Sealed				Sanitary Pit Latrine (VIP)		Total							
		Flush		Pour Flush											
		Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Total	Urban	Rural	Total
012901	Alilem	7	0	145	411	59	199	211	610	0	0	0	54	163	217
012902	Banayoyo	0	0	163	916	0	28	163	944	0	0	0	0	47	47
012903	Bantay	562	170	1,064	2,468	276	137	1,902	2,775	0	0	0	25	565	590
012904	Burgos	4	49	136	1,358	146	73	286	1,480	0	0	0	9	198	207
012905	Cabugao	205	11	1,299	3,815	39	244	1,543	4,070	0	0	0	25	82	107
012906	Candon	74	147	1,272	6,983	31	250	1,377	7,380	0	0	0	21	104	125
012907	Caoayan	172	101	883	1,048	189	0	1,244	1,149	12	92	104	88	654	742
012908	Cervantes	180	404	205	741	66	773	451	1,918	0	0	0	3	213	216
012909	Galimuyod	0	4	65	1,499	16	23	81	1,526	0	14	14	0	2	2
012910	G. del Pilar	30	2	76	390	13	95	119	487	0	0	0	0	54	54
012911	Lidlidda	0	0	224	482	11	20	235	502	0	0	0	10	17	27
012912	Magsingal	100	110	893	2,680	89	746	1,082	3,536	0	0	0	0	3	3
012913	Nagbukel	4	0	131	327	0	23	135	350	0	23	23	8	251	259
012914	Narvacan	90	360	440	5,524	0	0	530	5,884	0	0	0	12	917	929
012915	Quirino	1	0	225	640	40	414	266	1,054	0	0	0	3	78	81
012916	Salcedo	5	19	261	1,584	7	104	273	1,707	0	0	0	0	0	0
012917	San Emilio	0	0	296	307	29	0	325	307	92	416	498	9	43	52
012918	San Esteban	10	24	128	983	0	0	138	1,007	0	0	0	10	214	224
012919	San Ildefonso	24	17	151	680	0	0	175	697	0	0	0	23	56	79
012920	San Juan	25	174	616	2,711	53	0	694	2,885	0	30	30	13	697	710
012921	San Vicente	21	80	188	1,200	10	144	219	1,424	0	0	0	0	489	489
012922	Santa	28	5	279	1,948	48	0	355	1,953	0	0	0	8	241	249
012923	Santa Catalina	20	124	204	1,797	0	7	224	1,928	0	0	0	9	103	112
012924	Santa Cruz	11	43	724	4,420	77	322	812	4,785	0	0	0	56	316	372
012925	Santa Lucia	40	47	252	2,772	24	497	316	3,276	0	0	0	115	375	490
012926	Santa Maria	36	32	653	3,782	25	53	714	3,867	0	0	0	18	308	326
012927	Santiago	5	593	419	1,322	12	227	436	2,142	0	0	0	6	343	349
012928	Santo Domingo	14	58	550	3,291	0	0	564	3,349	0	0	0	13	356	369
012929	Sigay	0	0	0	267	0	0	0	267	0	0	0	0	33	33
012930	Sinait	35	1	519	3,266	7	423	561	3,692	0	0	0	0	558	558
012931	Sugpon	0	0	83	118	87	162	170	280	0	0	0	22	43	65
012932	Suyo	5	11	198	697	106	303	309	1,011	0	0	0	0	324	324
012933	Tagudin	146	195	583	3,814	66	418	795	4,427	0	0	0	94	582	676
012934	Vigan (Capital)	1,005	0	5,618	0	448	0	7,071	0	0	61	61	697	0	697
	Provincial Total	2,859	2,783	18,343	64,201	1,974	5,685	23,776	72,669	94	636	730	1,351	8,429	9,780

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PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Environment Sanitation - School Toilets		Date:			Page No.: 1 of 1	Filename: sanit.xls
Data Collection Level: Municipal		Prov. No.: 0129			Shtname: (M) School Toilets	
Region Number: 01		Prov. Name: Ilocos Sur			Form No.: M 6.2	

NEDA Geographic Code	Municipality	Number of School			Number of Student			Number of Toilets							Total Units
								Sanitary			Unsanitary				
		Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total		
012901	Abem	14	0	14	1,333	0	1,333	32	0	32	6	0	6		38
012902	Banayoyo	7	0	7	1,340	0	1,340	35	0	35	5	0	5		40
012903	Banay	18	1	19	3,552	2,523	6,075	88	8	96	14	0	14		110
012904	Burgos	10	1	11	1,942	161	2,103	42	2	44	11	2	13		57
012905	Cabugao	27	1	28	4,612	1,233	5,845	89	6	95	27	0	27		122
012906	Candon	28	3	31	9,147	1,741	10,888	106	6	112	64	2	66		178
012907	Caoayan	11	0	11	2,377	0	2,377	60	0	60	10	0	10		70
012908	Cervantes	18	2	20	2,509	210	2,719	32	2	34	6	1	7		41
012909	Galimuyod	9	1	10	1,451	80	1,531	17	2	19	7	1	8		27
012910	G. del Pilar	8	1	9	552	118	670	20	2	22	4	1	5		27
012911	Lidlidda	6	0	6	694	0	694	16	0	16	6	0	6		22
012912	Magsingal	18	2	20	3,466	1,267	4,733	69	4	73	10	1	11		84
012913	Nagbukel	9	0	9	1,151	0	1,151	36	0	36	4	0	4		40
012914	Narvacan	37	3	40	8,453	871	9,324	236	4	240	36	2	38		278
012915	Quirino	13	2	15	1,412	392	1,804	22	6	28	6	2	8		36
012916	Salcedo	17	1	18	2,312	174	2,486	41	2	43	6	1	7		50
012917	San Emilio	11	1	12	1,138	114	1,252	8	2	10	2	2	4		14
012918	San Esteban	5	1	6	1,279	168	1,447	36	2	38	7	1	8		46
012919	San Ildefonso	5	0	5	749	0	749	52	0	52	4	0	4		56
012920	San Juan	23	1	24	5,086	306	5,392	152	2	154	17	1	18		172
012921	San Vicente	5	1	6	1,407	171	1,578	18	2	20	10	1	11		31
012922	Santa	12	1	13	2,339	239	2,578	84	4	88	3	0	3		91
012923	Santa Catalina	7	1	8	2,069	193	2,262	29	2	31	8	1	9		40
012924	Santa Cruz	24	4	28	5,201	1,638	6,839	73	10	83	43	3	46		129
012925	Santa Lucia	17	2	19	4,271	1,341	5,612	32	6	38	6	2	8		46
012926	Santa Maria	20	1	21	5,452	276	5,728	145	4	149	13	1	14		163
012927	Santiago	12	2	14	2,906	556	3,462	37	4	41	16	4	20		61
012928	Santo Domingo	22	1	23	4,097	355	4,452	152	4	156	12	0	12		168
012929	Sigay	4	0	4	412	0	412	6	0	6	0	0	0		6
012930	Sinait	18	0	18	5,520	0	5,520	126	0	126	11	0	11		137
012931	Sugpon	9	0	9	640	0	640	12	0	12	8	0	8		20
012932	Suyo	19	0	19	1,987	0	1,987	30	0	30	16	0	16		46
012933	Tagudin	19	3	22	6,799	2,181	8,980	145	6	151	47	1	48		199
012934	Vigan (Capital)	18	5	23	10,152	5,415	15,567	210	12	222	18	2	20		242
	Provincial Total	500	42	542	101,807	21,723	123,530	2,288	104	2,392	463	32	495		2,887

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

NEDA Geographic Code	Municipality	Public Markets				Public Utilities				Parks/Playground			
						Jeepney/Bus Terminal							
		Number	Number of Toilets			Number	Number of Toilets			Number	Number of Toilets		
			Sanitary	Unsanitary	Total		Sanitary	Unsanitary	Total		Sanitary	Unsanitary	Total
012901	Alilem	0	0	0	0	0	0	0	0	0	0	0	0
012902	Banayoyo	0	0	0	0	0	0	0	0	2	2	0	2
012903	Bantay	0	0	0	0	3	6	6	6	0	0	0	0
012904	Burgos	1	2	0	2	0	0	0	0	1	0	2	2
012905	Cabugao	1	4	0	4	1	2	2	2	1	2	0	2
012906	Candon	0	0	0	0	0	0	0	0	0	0	0	0
012907	Caoayan	1	0	2	2	0	0	0	0	0	0	0	0
012908	Cervantes	0	0	0	0	0	0	0	0	0	0	0	0
012909	Galimuyod	0	0	0	0	0	0	0	0	0	0	0	0
012910	G. del Pilar	0	0	0	0	0	0	0	0	0	0	0	0
012911	Lidlidda	0	0	0	0	0	0	0	0	0	0	0	0
012912	Magsingal	1	2	0	2	0	0	0	0	0	0	0	0
012913	Nagbukel	0	0	0	0	0	0	0	0	0	0	0	0
012914	Narvacan	1	2	0	2	2	2	2	2	1	2	0	2
012915	Quirino	1	2	0	2	0	0	0	0	1	0	0	0
012916	Salcedo	1	2	0	2	0	0	0	0	0	0	0	0
012917	San Emilio	0	0	0	0	0	0	0	0	0	0	0	0
012918	San Esteban	1	2	0	2	0	0	0	0	0	0	0	0
012919	San Ildefonso	1	2	0	2	0	0	0	0	1	2	0	2
012920	San Juan	1	2	0	2	0	0	0	0	0	0	0	0
012921	San Vicente	1	2	0	2	0	0	0	0	1	2	0	2
012922	Santa	1	2	0	2	0	0	0	0	0	0	0	0
012923	Santa Catalina	0	0	0	0	0	0	0	0	0	0	0	0
012924	Santa Cruz	1	2	0	2	0	0	0	0	0	0	0	0
012925	Santa Lucia	1	2	0	2	0	0	0	0	1	2	0	2
012926	Santa Maria	1	2	0	2	0	0	0	0	1	0	0	0
012927	Santiago	0	0	0	0	0	0	0	0	0	0	0	0
012928	Santo Domingo	1	2	2	2	0	0	0	0	1	2	0	2
012929	Sigay	0	0	0	0	0	0	0	0	0	0	0	0
012930	Sinait	1	2	0	2	0	0	0	0	0	0	0	0
012931	Sugpon	0	0	0	0	0	0	0	0	1	0	0	0
012932	Suyo	0	0	0	0	0	0	0	0	0	0	0	0
012933	Tagudin	1	2	0	2	0	0	0	0	0	0	0	0
012934	Vigan (Capital)	1	2	2	2	0	0	0	0	1	2	0	2
	Provincial Total	19	42	4	46	12	12	12	12	9	5	6	6

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