

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 geographic 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 1* 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 Hunters,** 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 **F**ile menu, select **O**pen.
Short-cut: Click the **O**pen button.
2. From the **O**pen Dialog Box. Select the *h2o-res.xls* filename.
3. To update the **G**eneral 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 Information):** 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 **F**ile menu, select **O**pen.

Short-cut: Click the **O**pen button.

2. From the **O**pen Dialog Box, Select the *sanit.xls* filename.

3.1 To update the **H**ousehold 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 *S*Table 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 *S*Table 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 *S*Table 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 Well - 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 *S*Table 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 *S*Table 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.
- **Maximum 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 **F**ile menu, select **O**pen.

Short-cut: Click the Open button.

2. From the **O**pen 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 *S*Table 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 *S*Table 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 *S*Table 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.

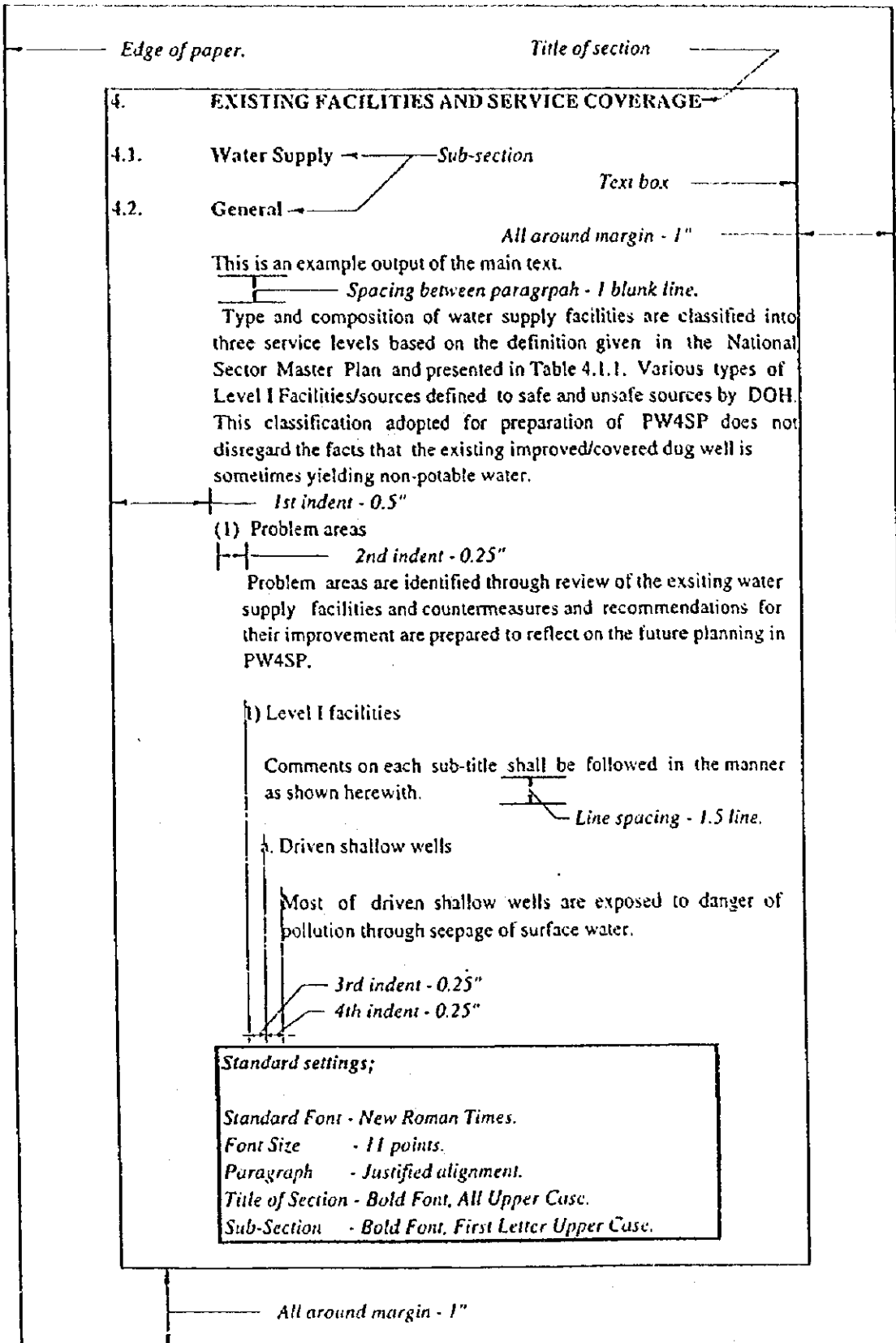
3.5.To update the **Unit Cost of Public Toilet**
click the tab of *STable 10.2.14* sheet.

- **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





3.3 Socio-economic Conditions
3.3.2 Basic Infrastructure

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

Geographic Number	Name of City or Municipality	Character	Services (As of 1997)									
			Elementary School			High School			Vocational Schools	Colleges and Universities	Hospitals	Banks and Financing Institutions
			Public Number	Private Number	Total Number	Public Number	Private Number	Total Number				
112401	Bansalan		26	1	27	1	3	4	2	7	2	
112403	Digos (Capital)		34	4	38	3	3	6	5	26	10	
112416	Don Marcelino		18		18	3		3		1		
112404	Hagonoy		21		21	1	1	2		3	2	
112405	Jose Abad Santos (Trinidad)		18		18	4	1	5		1		
112406	Kiblawan		26		26	1	3	4	1	2		
112407	Magsaysay		22	1	23	2	2	4		2		
112408	Malalag		15		15	1	1	2		5	1	
112409	Malita		47	1	48	5	1	6	1	4	2	
112410	Matanao		32	1	33	2	2	4	1	2	1	
112411	Padada		8	1	9	1	2	3	1	5	2	
112412	Santa Cruz		27		27	5	1	6		6	1	
112413	Santa Maria		27	1	28	4	3	7		3	1	
112415	Sarangani		21		21	2	1	3		1		
112414	Sulop		18		18	1	1	2		4	1	

Source:

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)

Provincial Water Supply, Sewerage and Sanitation Sector Plan (PW4SP)			Prov. Number: 1124			Page:						
Content: Health - Morbidity and Mortality			Prov. Name: Davao del Sur			Date: 20 Jul. 1999						
Data Collection Level: Provincial			Municipal Number:			Filename: Health.xls						
Region Number: XI			Municipal Name:			Form Number: P.3.1						
Cause Group Diseases of	ICD-10	Name of Diseases (Group)	Water Related Diseases	Annual Incidence								
				Morbidity			Mortality			Infant Mortality		
				Male	Female	Total	Male	Female	Total	Male	Female	Total
Infective and Parasitic (001-136)	A 01	2-4/ Typhoid/Paratyphoid	X			63						
	A 02	5-7/ Dysentery	X			1						
	A 03	8-10/ Intestinal Parasites	X									
	A 04	11-13/ Diarrhea	X			5,210			47			2
	A 05	14-16/ Tuberculosis				1,035			90			
	A 06	17-19/ Conjunctivitis	X									
	A 07	20-22/ Whooping Cough										
	A 08	23-25/ Throat/Ear/Nose										
	A 09	26-28/ Tetanus										
	A 10	29-31/ Septicemia										
	A 11	32-34/ Cholera	X									
	A 12	35-37/ Varicella, Chickenpox				332						
	A 13	38-40/ Measles				1,132						
	A 14	41-43/ Dengue Fever	X			223						
	A 15	44-46/ Viral Hepatitis	X									
	A 16	47-49/ Malaria	X			905						
	A 17	50-52/ Schistosomiasis	X									
	A 18	53-55/ Filariasis	X			1,113						
	A 19	56-58/ Venereal Diseases										
A 20	59-61/ Other Bacter / Viral Dis											
Neoplasms (140-239)	B 01	62-64/ Malignant Neoplasms							117			
	B 02	65-67/ Leukemia										
Endocrine, Nutritional & Metabolic (250-279)	C 01	68-70/ Diabetes Mellitus										
	C 02	71-73/ Nutritional Deficiencies										
	C 03	74-76/ Endocrine Disorder										
Blood & Blood Forming Organs (280-289)	D 01	77-79/ Anemias										
Mental Disorder (290-319)	E 01											
Nervous System & Sense Organs (320-389)	F 01	80-82/ Meningitis										3
	F 02	83-85/ Nervous System										
Circulatory Systems (390-459)	G 01	86-88/ Heart Diseases			280							
	G 02	89-91/ Vascular Diseases							253			2
Respiratory Systems (460-519)	H 01	92-94/ Bronchitis			3,876							
	H 02	95-97/ Pneumonia			2,412			168				32
	H 03	98-100/ Influenza			7,580							
	H 04	101-103/ Obstructive Pulmonary										
	H 05	104-106/ ARI			2,639							
Digestive System (520-579)	I 01	107-109/ Appendicitis										
	I 02	110-112/ Gastroint. Colitis										
	I 03	113-115/ Chronic Liver Disease										
	I 04	116-119/ Other Digestive Diseases										
Genito-Urinary System (580-629)	J 01	119-121/ Kidney/ Nephritis			2							
	J 02	122-124/ Urinary Infections										
Complication of Pregnancy & the Puerperium (630-676)	K 01	125-127/ Prematurity										3
Skin & Subcutaneous Tissue (680-709)	L 01	128-130/ Skin Diseases	X		349							
	L 02	131-133/ Scabies	X									
Musculoskeletal & Connective Tissue (710-739)	M 01	134-136/ Arthrop., Rheumatism										
Congenital Anomalies (740-759)	N 01	137-139/ Congenital Anomalies										4
Certain Causes of Prenatal Morbidity & Mortality (760-779)	P 01	140-142/ Birth Trauma										
	P 02	143-145/ Birth Injuries & Difficult Labor										
	P 03	146-148/ Resp. Fetus/Newborn										
	P 04	149-151/ Other Prenatal Causes										
Symptoms & Ill-defined Condition (780-799)	Q 01	152-154/ Senility							97			
	Q 02	155-157/ Ill-Defined Condition										
Accidents, Poisoning & Violence (800-999)	R 01	158-160/ Burns										
	R 02	161-163/ Suffoc. Foreign Body										
	R 03	164-166/ Other Accidents			392			190				7

3.6 Environmental Conditions

3.6.3 Solid Waste Disposal

Table 3.6.1 Municipal Solid Waste Collection and Disposal by Municipality

Provincial Water Supply, Sewerage and Sanitation Sector Plan (PW4SP)		Page:							
Content: Environment Sanitation - Solid Waste Collection and Disposal		Date: 20 Jul. 1998							
Data Collection Level: Provincial		Filename: Sanitation.xls							
Region Number: XI		Form Number: P.6.6							
		Prov. Number: 1124							
		Prov. Name: Davao del Sur							
NEDA Geographic Code	Name of City or Municipality	With Municipal Service				Without Service			
		Number of Collection Trucks		Disposal		Number of Household by Manner of			
		Open Dump Trucks	Closed Type Trucks	Total Units	Number of Households Served by Open Dump Site	Number of Household Served by Sanitary Landfill	Dumping (Land and Water)	Burying	Composting
Number	Character	Number	Number	Number	Number	Number	Number	Number	Number
112401	Bansalan	1		1	1,000		7,574	526	1,000
112403	Digos (Capital)	1	1	2	1,900		14,616	684	5,000
112416	Don Marcelino	1		1	150		4,804	500	538
112404	Hagonoy	1		1	750		4,270	642	3,000
112405	Jose Abad Santos (Trinidad)						6,471	1,000	1,995
112406	Kiblawan	1		1	550		5,371	466	1,000
112407	Magsaysay	1		1	910		5,062	1,000	1,476
112408	Malalag	1		1	800		3,863	593	1,000
112409	Malita	1		1	1,300		8,843	666	6,000
112410	Matanao	1		1	880		5,463	1,000	1,287
112411	Padada	1		1	850		1,709	1,000	1,074
112412	Santa Cruz		1	1	950		9,202	925	1,000
112413	Santa Maria	1		1	500		4,060	706	3,000
112415	Sarangani						2,343	200	666
112414	Sulop	1		1	430		2,914	988	1,000

Source of data and date:



- 4. **EXISTING FACILITIES AND SERVICE COVERAGE**
- 4.1 **Water Supply**
- 4.2 **Type of Facilities and Definition of Service Level Standard**

NEDA Board Resolution

No. 12 (s. 1995)

**APPROVING THE COMMON
DEFINITION OF TERMS RELATIVE TO WATER
SUPPLY, SEWERAGE AND SANITATION**

DEFINITION OF TERMS

Water Supply

Levels of Service

Three levels of water service shall be provided to urban and rural communities depending upon technical and financial considerations, the needs of the WDs and RWSAs, and their willingness and ability to share in the costs and the responsibility of constructing and maintaining the water systems, These are:

1. **Level I (point source) - a protected well or a developed spring with an outlet but without a distribution system, generally adaptable for rural areas where the houses are thinly scattered. A Level I facility normally serves an average of 15 households.**
2. **Level II (communal faucet system or standposts) -- a system composed of a source, a reservoir, a piped distribution network, and communal faucets. Usually one faucet serves 4 to 6 households. Generally suitable for rural and urban fringe areas where houses are clustered densely to justify a simple piped system.**
3. **Level III (waterworks system or individual house connections) -- a system with a source, a reservoir, a piped distribution network and household taps. It is generally suited for densely populated urban areas.**

Urban – the revised definition of urban population included the criteria on the economic and social functions of barrios, poblaciones and central districts resulting to the new definition which states:

1. In their entirety, all municipal jurisdictions which, whether designated as chartered cities, provincial capital or not, have a population density of at least 1,000 persons per square kilometers.
2. Poblaciones or central districts of municipalities and cities which have a population density of at least 500 persons per square kilometer.
3. Poblaciones or central districts (not included in nos. 1 and 2) regardless of population size which have the following:
 - a. Street pattern, i.e., network of streets in either at parallel or right angle orientation;
 - b. At least six establishments (commercial, manufacturing, recreational and/or personal services); and
 - c. At least three of the following:
 - i) a town hall, church or chapel with religious services at least once a month;
 - ii) a public plaza, park or cemetery;
 - iii) a market place or building on at least once a week and
 - iv) a public building like school, hospital, puericulture and health center or library.
4. Barrios having at least 1,000 inhabitants which meet the conditions set forth in no. 3 above, and in which the occupation of the inhabitants is predominantly non-farming/fishing.

Rural – all areas not falling under the urban classification (National Statistics Office).

Rural Waterworks and Sanitation Association (RWSAs) – non-stock, non-profit organizations envisioned to operate and manage Level II water supply facilities.

Barangay Waterworks and Sanitation Association (BWSA) – non-stock, non-profit organizations envisioned to operate and manage Level I water supply facilities.

Water Supply – for purpose of the plan, refers to the supply of the water for domestic, municipal, industrial/commercial uses.

Water Supply Coverage – refers to the number of people in a given community of geographical area who have access to safe water. The extent to which the population of a geographical area is covered (expressed in terms of the number of people served compared to the total population of that community or area).

Adequate Served – refers to those with the following rate or consumption:

Level I	at least 20 liters/capita/day
Level II	at least 60 liters/capita/day
Level III	at least 100 liters/capita/day

Service Coverage -- the no. of people a facility can serve.

Level I Water Supply Systems

1. Deepwell – are characterized by aquifers or water bearing formations generally located at a depth of more than 20 (mbgs.). Construction of deepwells with depths greater than 20 meters are recommended in these areas.
2. Shallow Well – are areas suitable for construction of well with depths not more than 20 meters and are recommended for rural water supply development, particularly levels I and II services. Static water level in these areas are generally within 6 meters below ground surface.
3. Developed Springs -- developed to capture the natural flow of an aquifer, pollution generally originates close to the point of capture. It is protected by: 1) excluding shallow seepage waters through encircling the spring with a watertight chamber penetrating a safe-distance into the aquifer and; 2) diverting surface run-off away from the immediate vicinity.
4. Protected Dug Wells – WASAMS defines protected dug wells as those which are adequately protected (guarded) against surface or outside contamination through the use of lining or covering, with a rim sufficiently raised above the ground level, and may be equipped with a pump (any type).

Salt Intrusion -- encroachment of salt water upon fresh water.

Potable Water -- water that is satisfactory for drinking, culinary and domestic purposes and meets the requirements of the health authority having jurisdiction. (Plumbing Code).

Population Underserved -- population inadequately served.

Population Unserved -- population without access to water supply facility.

Population Served -- no. of population adequately served of connections x no. of persons served per connection.

Rainwater Cisterns/Collectors/Catchers -- reservoirs, tanks or vessels for the storage of rainwater.

Reliable Water Supply -- efficiency in the delivery of water supply in terms of quantity and quality.

Safe Drinking Water -- water must be free of disease-producing bacteria (pathogens). In addition, the water should not possess undesirable tastes, odors, colors, turbidity or chemicals.

Service Area -- geographic jurisdiction of water utilities.

Non-revenue Water -- unbilled water.

Appropriate Technologies -- suited to local conditions and resources.

Infiltration Galleries -- horizontal wells which collect water over the entire length.

Accounted-for-water -- billed water.

Access to Water Supply Facilities -- access to water supply is categorized as follows:

- Level I - the farthest user is not more than 250 meters from the point source.
- Level II - the farthest house is not more than 25 meters from the communal faucet system.
- Level III - the house have service connection from the system.

Private Water System -- privately-owned water supply system.

Public Water System -- system owned by the government.

DEFINITION OF TERMS

Sewerage and Sanitation

Sanitation -- the development and practical application of sanitary measures for the sake of cleanliness and protecting health.

Sanitary Toilet -- is an approved type of facility used for receiving and disposing human waste (feces and urine).

APPROVED TYPES

1. Flush -- type of toilet facility with a mechanical device used to wash the waste into the receiving sewer or septic tank by the use of flushing water and with traps to provide a "water seal".
2. Poor Flush -- type of toilet facility without a mechanical device and in hand-flush with "water seal" connected to receiving sewer, septic tank or leaching pit.
3. Ventilated Improved Pit refers to an on-site toilet facility without using any amount of water comprising a vent pipe with a fly screen used to trap flies in a pit and, also allows evacuation of foul air into the atmosphere. This minimizes foul odor with the latrine superstructure and traps flies that could not spread diseases through faecal contamination.
4. Sanitary Pit Privy -- type of toilet facility without using any amount of water, with a pit of at least 1-2 meters depth, a hole of one square meter, provided with a floor covering a riser, seat with cover which are all fly-and rodent proof and a building for privacy including the Antipolo type.

Unsanitary Toilet -- a type of facility used for receiving and disposing human waste which does not fall under the category of approved types of toilet facilities.

UNAPPROVED/UNSANITARY TYPES

1. Open Pit Privy- a pit of at least the same dimension as the sanitary pit privy, provided with pit flooring, with or without riser and seat and without cover to protect from flies and rodents.
2. Overhang – a structure provided with flooring and with an opening built above the body of water or above the ground without pit under it, used for defecation of the disposal of human waste. It can be a part of the house or a separate structure outside the house.

LEVELS OF TOILET USE

1. Communal – a toilet facility shared by two or more households.
2. Public – toilet facility located at public places like markets, bus stations, etc. intended for public use.
3. School – a toilet facility located in a school.
4. Household -- a toilet facility being used by an individual household.

Sewerage - facilities that collect human waste and sullage from residences and establishments usually piped and conveyed in structures (sewers, pump stations) for eventual central treatment and safe disposal. Piped sewerage includes a collection system (street laterals), a conveyance system (trunk sewers and pump stations), and a treatment plant/disposal system.

Human Waste – solid (feces) and liquid (urine) wastes from human.

Sullage – liquid wastes resulting from washing, bathing and laundry.

Drainage System – facilities that deal with rainwater.

Unsanitary Drainage System – facilities without treatment that deal with rainwater and also receive septic tank overflow and sullage. Includes open canals.

Without Toilet – households without any toilet but using body of water like rivers, lakes, etc. open field including coastal areas, and other mean to dispose human waste.

Access – availability of toilet facility within the household premises that can be used anytime.

On Site – the human waste is deposited and treated where the toilet facility is located.

Off Site – the human waste is transported for treatment.

4.2 Sanitation and Sewerage

4.2.3 Sanitation Facilities and Service Coverage

Provincial Water Supply, Sewerage and Sanitation Sector Plan (PW4SP)																		
Content: Environment Sanitation - Household Toilet																		
Data Collection Level: Provincial																		
Region Number: XI																		
Prov. Name: Davao del Sur																		
Prov. Number: 1124																		
Form Number: P.6.1																		
Page:																		
Date: 20 Jul. 1998																		
Filename: Sanitation.xls																		
Form Number: P.6.1																		
Geographic Code	Number of Households Using Sanitary Toilets																	
	Flush			Pour Flush			Sanitary Pit Latrine (VIP)			Total			Number of Households Using Unsanitary Toilets			Number of Households Without Toilets		
	Urban Number	Rural Number	Total Number	Urban Number	Rural Number	Total Number	Urban Number	Rural Number	Total Number	Urban Number	Rural Number	Total Number	Urban Number	Rural Number	Total Number	Urban Number	Rural Number	Total Number
112401	32	82	114	861	6,716	7,577	973	103	973	7,771	153	531	684	246	403	649	649	
112403	2,278	397	2,675	4,813	11,685	16,498	1,361	197	1,558	13,443	509	238	747	716	6	722	722	
112416	42	13	55	767	1,972	2,739	990	29	990	2,935	636	472	1,108	680	431	1,111	1,111	
112404	38	38	76	602	5,091	5,693	1,040	166	1,206	6,169	193	627	820	359	508	867	867	
112405	28	34	62	471	4,698	5,169	1,129	195	1,324	5,861	209	1,198	1,205	291	1,415	1,706	1,706	
112406	42	33	75	553	3,938	4,491	1,130	186	1,316	5,151	184	756	940	242	423	665	665	
112407	26	31	57	604	4,424	5,028	1,208	128	1,336	5,663	184	756	940	356	731	1,087	1,087	
112408	30	42	72	658	4,282	4,940	1,45	850	1,500	5,174	45	95	140	70	39	109	109	
112409	110	278	388	1,404	10,411	11,815	1,525	202	1,727	12,214	357	1,110	1,467	426	986	1,412	1,412	
112410	174	48	222	247	4,867	5,114	1,150	171	1,321	6,065	39	1,031	1,070	173	730	903	903	
112411	120	45	165	542	2,545	3,087	84	90	2,680	3,366	336	128	464	757	6	743	743	
112412	220	73	293	1,553	5,643	7,196	1,341	356	2,129	7,057	870	392	1,262	1,077	552	1,629	1,629	
112413	40	37	77	738	4,693	5,431	1,116	91	1,207	5,846	82	544	626	355	570	925	925	
112415	16	12	28	256	786	1,042	525	153	678	1,323	11	745	756	83	622	705	705	
112414	116	22	138	499	1,543	2,026	112	102	2,128	2,591	195	860	1,055	255	704	959	959	

Provincial Water Supply, Sewerage and Sanitation Sector Plan (PW4SP)		Page:					
Content: Environment Sanitation - School and Student		Date: 20 Jul. 1998					
Data Collection Level: Provincial		Filename: Sanitation.xls					
Region Number: XI		Form Number: P.6.2					
Geographic Code	Name of City or Municipality	Number of School			Number of Student		
		Public	Private	Total	Public	Private	Total
		Number	Number	Number	Number	Number	Number
112401	Bansalan	27	4	31	10,287	2,158	12,445
112403	Digos (Capital)	37	7	44	26,738	2,936	29,674
112416	Don Marcelino	21		21	5,561		5,561
112404	Hagonoy	22	1	23	9,066	516	9,582
112405	Jose Abad Santos (Trinidad)	22	1	23	6,339	221	6,560
112406	Kiblawan	27	3	30	6,650	1,194	7,844
112407	Magsaysay	24	3	27	9,749	1,224	10,973
112408	Malalag	16	1	17	6,766	225	6,991
112409	Malita	52	2	54	16,878	834	17,712
112410	Matanao	34	3	37	10,270	835	11,105
112411	Padada	9	3	12	4,236	953	5,189
112412	Santa Cruz	32	1	33	15,498	518	16,016
112413	Santa Maria	31	4	35	9,744	866	10,610
112415	Sarangani	23		23	7,290		7,290
112414	Sulop	19	1	20	6,515	375	6,890

Source:

Provincial Water Supply, Sewerage and Sanitation Sector Plan (PWASP)																
Page: _____																
Date: 20 Jul. 1998																
Content: Environment Sanitation - School Toilets																
Data Collection Level: Provincial																
Region Number: XI																
Prov. Name: Davao del Sur																
Prov. Number: 1124																
Form Number: P.6.3																
Number	Name of City or Municipality	Character	Number of Toilets						Total Units							
			Sanitary			Unsanitary			Sanitary			Unsanitary				
			Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total		
Male Number	Female Number	Male Number	Female Number	Male Number	Female Number	Male Number	Female Number	Male Number	Female Number	Male Number	Female Number	Male Number	Female Number	Male Number	Female Number	
112401	Bansalan		45	45	9	9	54	54	36	36	3	3	39	39	93	93
112403	Digos (Capital)		78	78	24	24	102	102	48	48	6	6	54	54	156	156
112416	Don Marcelino		33	33			33	33	42	42			42	42	75	75
112404	Hagonoy		42	42	3	3	45	45	39	39	3	3	42	42	87	87
112405	Jose Abad Santos (Trinidad)		36	36	3	3	39	39	33	33	3	3	36	36	75	75
112406	Kiblawan		30	30	6	6	36	36	51	51	6	6	57	57	93	93
112407	Magsaysay		42	42	9	9	51	51	36	36	6	6	42	42	93	93
112408	Malalag		33	33	3	3	36	36	27	27	3	3	30	30	63	63
112409	Malita		114	114	12	12	126	126	66	66	3	3	69	69	195	195
112410	Matanao		54	54	12	12	66	66	60	60	6	6	66	66	132	132
112411	Padada		24	24	12	12	36	36	12	12	3	3	15	15	51	51
112412	Santa Cruz		78	78	3	3	81	81	42	42	3	3	45	45	126	126
112413	Santa Maria		66	66	18	18	84	84	45	45	6	6	51	51	135	135
112415	Surangani		39	39			39	39	36	36			36	36	75	75
112414	Sulop		33	33	3	3	36	36	36	36	3	3	39	39	75	75

Source of data and date:

Provincial Water Supply, Sewerage and Sanitation Sector Plan (PW4SP)												
Content: Environment Sanitation - Public Toilets(Public Market)											Page:	
Data Collection Level: Provincial											Date: 20 Jul. 1998	
Region Number: XI											Filename: Sanitation.xls	
Prov. Name: Davao del Sur											Form Number: P.6.4.1	
Geographic Code	Name of City or Municipality	Character	Number	Public Markets						Total		
				Number of Toilets			Number of Toilets					
				Sanitary		Unsanitary		Total				
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female			
112401	Bansalan		1	1							1	1
112403	Digos (Capital)		2	2	4						2	4
112416	Don Marcelino		1	1	1						1	1
112404	Hagonoy		1	1	1						1	1
112405	Jose Abad Santos (Trinidad)		1	1	1						1	1
112406	Kiblawan		1	1	1						1	1
112407	Magsaysay		1	1	1						1	1
112408	Malalag		1	1	1						1	1
112409	Malita		3	1	1	2	2	2	2	3	3	3
112410	Maranao		5	1	1	4	4	4	4	5	5	5
112411	Padada		1	1	1						1	1
112412	Santa Cruz		2	1	1	1	1	1	1	2	2	2
112413	Santa Maria		2	1	1	1	1	1	1	2	2	2
112415	Sarangani		1	1	1						1	1
112414	Sulop		1	1	1						1	1

Source of data and date:

Provincial Water Supply, Sewerage and Sanitation Sector Plan (PW4SP)										Page:	
Content: Environment Sanitation - Public Toilets (Jeepney/Bus Terminal)										Date: 20 Jul 1998	
Data Collection Level: Provincial										Prov. Number: 1124	
Region Number: XI										Prov. Name: Davao del Sur	
Jeepney/Bus Terminal											
Geographic Code	Name of City or Municipality	Character	Number	Number of Toilets				Total			
				Sanitary		Unsanitary		Male	Female		
Number			Number	Male	Female	Number	Female	Number	Number		
112401	Bansalan										
112403	Digos (Capital)										
112416	Don Marcelino										
112404	Hagonoy										
112405	Jose Abad Santos (Trinidad)										
112406	Kiblawan										
112407	Magsaysay										
112408	Malalag										
112409	Malita										
112410	Matanao										
112411	Padada										
112412	Santa Cruz										
112413	Santa Maria										
112415	Sarangani										
112414	Sulop										

Source of data and date:

Provincial Water Supply, Sewerage and Sanitation Sector Plan (PW4SP)		Page:						
Content: Environment Sanitation - Public Toilets(Parks/Playground)		Date: 20 Jul 1998						
Data Collection Level: Provincial		Filename: Sanitation.xls						
Region Number: XI		Form Number: P.6.4.3						
Prov. Name: Davao del Sur								
Geographic Code	Name of City or Municipality	Number	Parks/Playground					
			Number	Sanitary		Unsanitary		
				Male Number	Female Number	Male Number	Female Number	
Character	Number	Male Number	Female Number	Male Number	Female Number	Total		
112401	Bansalan	1	1	1			1	1
112403	Digos (Capital)	1						
112416	Don Marcelino	1						
112404	Hagonoy	1						
112405	Jose Abad Santos (Trinidad)	1						
112406	Kiblawan	1						
112407	Magsaysay	1						
112408	Malalag	1						
112409	Malita	1						
112410	Matanao	1						
112411	Padada	1						
112412	Santa Cruz	1						
112413	Santa Maria	1						
112415	Sarangani	1						
112414	Sulop	1	1	1				1

Source of data and date:

5. EXISTING SECTOR ARRANGEMENT AND INSTITUTIONAL CAPACITY

5.2 Sector Reforms

A. IMPLEMENTATING RULES AND REGULATIONS

IMPLEMENTATING RULES AND REGULATIONS OF NEDA BOARD RESOLUTION NO.4 (SERIES OF 1994), CLAUSE (G)

PREFACE

The following Implementing Rules and Regulations (IRR) of Clause (g) of NEDA Board Resolution No. 4 (series of 1994) was prepared with assistance from the World Bank, upon request of the Philippine Government, through the Department of the Interior and Local Government (DILG). It is an update of the earlier draft prepared in August 1995 and incorporates the developments that have occurred in the sector since that time. The intention is to provide a comprehensive and consistent set of IRR that reflects evolving policies in the sector to address basic service deficits. In particular, it attempts to translate the global sectoral principles of managing water as an economic good and managing services at the most appropriate level, into rules and regulations that can be understood and implemented by the local government units. This IRR reflects the following policies currently being developed by the Government:

- a. Encouraging LWUA lending rates to local water districts to be aligned to market rates;
- b. Providing national government grants for source development of Level I systems in support of a national objective of poverty alleviation;
- c. Developing a national sector plan that will provide the basis for provinces and cities/municipalities to plan and implement water and sanitation investments based on what communities want and are willing to pay for;
- d. Instituting a framework for economic regulation of the water supply and sanitation sector and defining the role of the LGU in this framework; and
- e. Instituting a system of public performance audit of public and private water utilities, so that consumers feedback on service coverage and reliability is available at the national and local levels of Government.

A major development was the creation of the Presidential Task Force on Water Resources Development and Management in October 1996, which has the objective of streamlining the regulatory environment of the sector, that is, linking resource regulation with the economic regulation aspects. A proposed bill prepared by the Task Force has been filed with Congress in July 1997 for the creation of a Water Resources Authority of the Philippines (WRAP) to undertake these regulatory functions, among others. Once this is approved by Congress and passed into law, the IRR may have to be revised to reflect the major institutional changes, particularly with regard to the roles of national government agencies in the sector.

RULE 1 PURPOSE AND OBJECTIVES

Article 1. Title. These rules shall be known as the Implementing Rules and Regulations of clause (g) of NEDA Board Resolution No. 4, (series of 1994).

Article 2. Purpose. The purpose of these rules and regulations is to implement clause (g) of NEDA Board Resolution No. 4, (series of 1994), and is in support of NEDA Board Resolution No. 6, (series of 1996) which defines the executing agency arrangement for devolved infrastructure activities/facilities, including water supply, where national government assistance is provided. Clause (g) of NEDA Board Resolution No. 4 (series of 1994) states that:

"Level I (point source system), Level II (command faucet) and Level III (house connections water supply projects may be implemented by the concerned LGUs within their jurisdiction. LWUA shall implement only financially viable Level III water supply projects in areas outside the MWSS jurisdiction. DILG's participation will consist of general administration and institution building, such as assistance to LGUs in the formation of Rural and/or Barangay Waterworks and Sanitation Associations (RWSAs/BWSAs) as well as in the identification of water supply systems. MWSS will be responsible for Level III water systems in Metro Manila and adjacent areas. DPWH, together with DILG and DOH, will provide technical assistance (within a period of about two years) to LGUs in the planning, implementation, and operation and maintenance of water supply facilities."

Annex C presents NEDA Board Resolution No. 6, (series of 1996).

Article 3. Objectives. The objectives of the Implementing Rules and Regulations are as follows:

- a. To definite the role of local government units (LGUs) in the provision of water supply services and the assistance to be made available to them by national government agencies concerned;

- b. To provide guidance to the LGUs in the development and implementation of viable and sustainable water supply projects, to the extent feasible, supporting the principles espoused by the sector of managing water as an economic good, promoting a demand-oriented approach in the provision of services and management to be made at the most appropriate level, and greater private sector participation in service delivery; and
- c. To identify institutional strengthening needs of LGUs to further develop their capacity to adequately perform their agreed functions in the sector.

RULE 2

SCOPE

Article 4. Scope. These Implementing Rules and Regulations shall apply to water supply projects to be implemented and managed by LGUs where national government assistance is provided.

RULE 3

DEFINITION OF TERMS

Article 5. Definition of Terms. For purpose of these Implementing Rules and Regulations, the following terms shall be construed to mean as follows:

- a. **Levels of Service.** Based on NEDA Board Resolution No. 12 (series of 1995), approving the common definition of terms relative to water supply, sewerage and on-site sanitation, levels of service are defined as follows:

Level I (Point Source) – a protected well or a developed spring with an outlet but without a distribution system; generally adaptable for rural areas where the houses are thinly scattered. A Level I facility normally serves an average of 15 households.

Level II (Communal Faucet System or Standposts) – a system composed of a source, a reservoir, a piped distribution network, and communal faucets. Usually, one faucet serves four to six households. It is generally suited for rural and urban fringe areas where houses are clustered densely to justify a simple piped system.

Level III (Waterworks System or Individual House Connections) – a system with a source, a reservoir, a piped distribution network and household taps. It is generally suited for densely populated urban areas.

- b. A **financially viable water supply system** refers to a system wherein its revenues can cover for all costs related to capital and operation and maintenance, including providing for reasonable reserves for future expansion. For those systems managed by water districts, a financially viable system is one that is able to generate revenues directly from user payments sufficient to cover all costs¹. For LGU-managed directly systems, capital and operations and maintenance costs shall be recovered through a combination of user fees, general municipal taxes and other incomes available to the LGUs.

RULE 4

ROLE OF LOCAL GOVERNMENT UNITS

Article 6. General. The Local Government Code of 1991 mandates the decentralization and devolution of authority to LGUs in providing for certain basic services, which include safe potable water. At the local level, the LGUs are responsible for providing reliable water supply to their constituents, whether these are in the form of Levels I, II or III systems, depending on the expressed demand by the community for these services. LGUs may both directly provide and finance these services, or involve the private sector to participate in both provision and financing through concession, management or service contracts.

Article 7. Financing and Cost Recovery. In financing water supply investments, the LGUs may tap their Internal Revenue Allotment and/or locally generated revenues, or leverage these resources to borrow from government and private financial institutions. The amount that an LGU can borrow, including the required equity, is dependent on its current and expected revenue performance, as well as the amount of user charges and equity contributions from the community. The amount shall be a local decision of the LGUs concerned.

For any national government grant that may be provided for the development of Level I systems, the LGU and beneficiaries, concerned shall be required to provide any remaining amount as equity to the

¹ The Department of Finance is considering aligning the LWUA lending rates to local water districts toward market rates to allow for a more efficient use of scarce resources, as well as to provide for consistent policy on lending to LGUs by government financial institutions.

investment. No subsidies from the national government shall be provided for Levels II and III systems.²

In providing for Level III service, the LGUs may opt to form a water district or an LGU company, provide a franchise to a private party or participate in a joint venture with a private party. Except in areas with water districts, LGUs shall maintain overall responsibility for ensuring consumer satisfaction through the exercise of institutional and/or contractual regulatory powers over local water utilities³, in collaboration with other national regulatory agencies, and by instituting a system of public performance audit.

Cost recovery through user payments shall be encouraged for both capital and operation and maintenance costs. However, at the minimum, user payments shall be required to cover the operation and maintenance costs in all services levels. For LGU- owned, operated and/or guaranteed systems, any shortfall in revenues required for loan repayment shall be financed by the LGU from its Internal Revenue Allotment and/or locally-generated revenues, following a process of negotiation between the LGU and the beneficiaries concerned on the level of user payments.

For systems managed by local water districts, full cost recovery, through user charges, is required by LWUA.

In areas where there are existing local water districts, LGUs may finance rehabilitation works and/or expansion of the existing waterworks system on the following conditions:

- a. The local water district concerned is not in LWUA's current program of assistance, that is, it is not included in any loan of LWUA with a financing institution, and
- b. Endorsement by the local water district concerned should have been secured.

In the event that the local water district is servicing a loan from LWUA, the local water district shall seek clearance from LWUA prior to entering into an agreement with the LGU concerned on any program of system expansion.

² This policy has been approved by the Investment Coordination Committee of the NEDA Board.

³ As per Presidential Decree No. 198 (Provincial Water Utilities Act), LWUA regulates the technical standards and the tariffs of local water districts, based on its requirement to issue a certificate of conformance on every loan disbursed to the latter. Source regulation is done by the National Water Resources Board. At the moment, there is no recourse by the LGU in case of non-performance by the local water district. This is an issue that needs to be addressed by Government.

Article 8. Management of Systems. LGUs shall adopt commercial principles in the operation and management of water utilities in order to provide cost-effective and reliable services to consumers, whether management of the system is a direct responsibility of the LGU or is contracted out by the LGU to the private sector. An LGU may also consider amalgamating or consolidating its system with that of its neighboring LGUs in order to benefit from economies of scale that could expand water supply services to consumers at the lowest possible cost.

For the operation and management of Level I and II systems, the LGUs shall initiate the formation of Barangay and Rural Waterworks and Sanitation Associations (BWSAs/RWSAs), respectively, through a participatory approach involving consultation with all stakeholders (Article 20) and assist in their registration with the appropriate authorities (Article 21). Upon request, LGUs may accredit duly registered RWSAs/BWSAs in order to enable them to avail of financial assistance from local governments. LGUs shall have an overall supervision of RWSAs and BWSAs.

Article 9. Project Planning and Development. Provinces and cities/municipalities shall be required to prepare, and update on an annual basis, provincial and city/municipal sector plans that are consistent with a national sector plan⁴. These sector plans shall be integrated into the local investment programs. Water supply projects shall be identified from the local investment program, a financing program of foreign and nationally/locally-generated resources, including private sector resources, shall support the local investment program.

Article 10. Approval and Award of Contracts. The LGUs shall be required to conduct public bidding, in accordance with the provisions of Law, including Presidential Decree No. 1594, as amended, Executive Order No.302 and other applicable laws, and shall have the final authority to approve and award contracts for water supply and sanitation projects within their jurisdictions.

Article 11. Application for Water Rights. LGUs or the concerned water utility shall apply for water rights from the National Water Resources Board prior to implementing a project that would require extraction of water.

Article 12. Public Performance Audit. The LGUs shall establish a system of public performance audit for public and private water utilities focusing on critical performance indicators. Upon request of the LGUs, DILG may provide technical assistance for this purpose, in coordination with appropriate national government agencies.⁵

⁴ ADB is assisting the preparation of a National Sector Plan for Water Supply, Sewerage and Sanitation for 1999-2004

⁵ This system shall be pilot-tested in Metro Manila by the MWSS with World Bank financing.

RULE 5
ROLES OF NATIONAL GOVERNMENT AGENCIES

Article 13. Department of the Interior and Local Government (DILG). The DILG shall have the following responsibilities in the sector:

- a. Raise awareness of LGUs on opportunities relating to the sector, within the framework of relevant government policies, such as financing schemes and available assistance from local and foreign financing institutions, technological breakthroughs, management and institutional arrangements, etc.;
- b. Facilitate transactions between LGUs and communities and lending institutions by preparing water supply investment packages, assisting in the financial, economic and institutional and environmental data collection and analysis, etc., in coordination with appropriate national government agencies;
- c. Build capacity of LGUs and BWSAs/RWSAs in the general areas of planning, implementation, management, monitoring and evaluation, and regulation, upon agreement with the LGUs, and as required by financing institutions, in coordination with national government agencies such as DPWH in the case of the engineering aspects;
- d. Develop and maintain a national data management system of LGU-managed water systems to include data on extent of service coverage, cost recovery, collection efficiency, size of water systems, nature of water resources, among others, in coordination with appropriate national government agencies;
- e. Establish a system for monitoring strategic performance of LGUs in relation to the sector, including compliance with technical standards established by LWUA and DPWH;
- f. Upon agreement with the LGU, provide technical assistance in the establishment of a system of public performance audit, in collaboration with appropriate national government agencies;
- g. Coordinate sector activities of LGUs vis-a-vis other national government documents and issue regular bulletins;

- h. Monitor the implementation of this IRR, including the formulation of monitoring and evaluation parameters and reporting requirements; and
- i. Act as the coordinator for projects funded by the National Government per NEDA Board Resolution No. 6 (series of 1996).

Article 14. Local Water Utilities Administration (LWUA). The LWUA shall have the following responsibilities in the sector:

- a. Act as a specialized lending institution for local water districts;
- b. Provide technical assistance to local water districts in the areas of operation, maintenance, personnel training and fiscal practices;
- c. Upon agreement with the LGU, provide technical and financial assistance in the conduct of engineering studies;
- d. Approve tariffs of local water districts;
- e. Establish and update, as and when necessary, the technical standards for local water utilities, including LGU-managed systems;
- f. Monitor and evaluate the performance of local water districts; and
- g. Register RWSAs and furnish all registration documents to DILG.

Article 15. Department of Public Works and Highways (DPWH). The DPWH shall have the following responsibilities in the sector:

- a. Set and/or update, as and when necessary, technical standards for engineering surveys, design, construction and operation and maintenance of Level I systems;
- b. Upon agreement with the LGUs, assist in the conduct of engineering surveys and in the preparation of plans, specifications and programs of work, through its District Offices;
- c. Upon agreement with the LGUs, assist in construction management, through its District Offices; and

- d. Conduct technical researches in coordination with the LGUs.

Article 16. Department of Health (DOH). The DOH shall have the following responsibilities in the sector:

- a. Set and/or update, as and when necessary, standards on water quality testing, treatment and surveillance, and sanitary practices;
- b. Provide technical assistance to the LGUs in the conduct of periodic water quality control and surveillance-related activities; and
- c. Monitor and evaluate, on a regular basis, health and hygiene education programs implemented by local health offices, particularly in areas where waterworks systems are expected to be constructed.

Article 17. National Water Resources Board (NWRB). The NWRB shall have the following responsibilities in the sector:

- a. Regulate the use of water resources through the issuance of water rights;
- b. Regulate tariffs of privately-run water system; and
- c. Establish and manage a user-friendly water resources data management system.

Article 18. Metropolitan Waterworks and Sewerage System (MWSS). The MWSS shall be responsible for water systems in Metro Manila and its adjacent areas.

RULE 6

RURAL/BARANGAY WATERWORKS AND SANITATION ASSOCIATIONS

Article 19. General Provision. A Rural/Barangay Waterworks and Sanitation Association shall be formed to manage public water systems and sanitation facilities: RWSAs for Level II systems and BWSAs for Level I systems. RWSAs/BWSAs shall initiate/assist in site identification, planning, implementation and evaluation of water supply projects as well as guide the construction and/or maintenance of household and community latrines (toilets).

Article 20. Organization of RWSAs/BWSAs. RWSAs and BWSAs shall be organized upon initiation of the LGU. A participatory approach shall be adopted in the formation of RWSAs/BWSAs with the LGU concerned taking the lead and non-government organizations (NGOs) providing technical assistance, as necessary. Prior to the formation of RWSAs/BWSAs, dialogues shall be conducted with and among all stakeholders such as women's groups, civic and religious organization, health practitioners, NGOs and other people's organizations.

Article 21. Registration Requirements. RWSAs/BWSAs shall register with DILG. BWSAs shall be encouraged to associate with other BWSAs or the RWSAs prior to registration. DILG shall keep a record of all registration documents.

Article 22. Powers. Every duly registered RWSAs/BWSA shall be autonomous and shall have the power and capacity to:

- a. Award and enter into a contract(s) with private contractors for the delivery of necessary services or the supply of materials, in the course of managing a public water and sanitation facility, subject to existing laws, rules and regulations;
- b. Oversee the implementation of project undertaken by private contractors;
- c. Own and manage the operation of the water facility in a sustainable manner, including providing for adequate reserves for maintenance and repair, setting appropriate levels of user fees, and implementing billing and collection schemes;
- d. Handle the activities required of any lawful business transaction entered into by the Association;
- e. Enter into agreement with other RWSAs/BWSAs for any merger or consolidation as may be proven advantageous to their operations;
- f. Convene meetings of water users for the purpose of information dissemination, consultation, public hearing on water rates and other activities deemed important;
- g. Initiate improvements in operations found to be advantageous and favorable to the communities concerned;
- h. Decide on matters found to be advantageous and favorable to the communities concerned; and

- i. Prepare an annual report on its operations.

Article 23. Capability Building of RWSAs/BWSAs. RWSAs and BWSAs may request assistance for capability building from LGUs and/or DILG, DPWH and other concerned agencies, through the LGUs.

RULE 7

PROJECT DEVELOPMENT AND IMPLEMENTATION

Article 24. Sector Planning. Planning and development of water supply investment shall be made within the framework of national policies, and shall implement specific targets in the provincial and city/municipal sector plans. These plans shall define the strategies, policies and approaches in sector development at different levels of government. A National Sector Plan for Water Supply, Sewerage and Sanitation shall be prepared, and updated, on a regular basis, by the National Economic and Development Authority (NEDA), in coordination with the concerned oversight water agencies, and shall provide the national policy framework. At the provincial level, the LGUs, through their respective Provincial Planning and Development Offices, shall prepare, and update, on an annual basis, the Provincial Water Supply, Sewerage and Sanitation Sector Plans. At the city/municipal level, a similar sector plan shall be prepared and updated, on an annual basis, by the LGUs, through their City/Municipal Planning and Development Offices. The respective Local Councils shall approve the provincial and city/municipal sector plans.

Article 25. Project Identification. On the basis of the provincial and city/municipal sector plans, water supply investments shall be identified and developed into a local investment program that includes an appropriate financing plan. The Local Council concerned shall approve the local investment program. The proposed investments shall then be developed according to a demand-driven approach that would allow beneficiaries to select from among cost-effective technical options and from among financing options. The LGUs may avail of technical assistance from the DILG in the preparation of these project packages (Rule 5).

Water supply investment shall be developed to the principles of managing water services at the most appropriate level and providing services based on what local consumers want and are willing to pay for. This means that LGU systems shall be constructed on the basis of choosing among technical options that are affordable through the financial resources made available by users, communities and LGUs. The process of determining demand for a particular service delivery shall be concluded through a negotiated agreement between the LGU, water utility and the users, on how the costs will be shared at the town, barangay and household levels.

Article 26. Technical Aspects. Technically feasible options shall be developed, particularly for a Level II service level. These options may include varying levels of operation (in terms of operating hours), which may have substantial implications on capital and operating and maintenance costs. In addition, the operation and management (O&M) cost of a technical option is strongly influenced by the management mode chosen by an LGU, economies of scale factors and the size of the service area. Thus, for any Level III service, at least two technical options shall be explored; those of an inter-LGU service delivery organization involving amalgamation of service areas and of singled LGU management systems. The former option shall be explored and developed further only upon agreement with the LGU concerned.

In the conduct of the engineering work (i.e., feasibility studies and detailed design), the LGUs may tap the services of the private sector, using their internal resources or may request the DILG, DPWH and/or LWUA for financial and/or technical assistance.

Article 27. Financing and Management Options. A range of options is available to the LGUs on financing and management of Level III systems. They include, but are not limited to, the following options:

Options 1: The LGU may finance the system from its internal resources or may borrow from a financial institution. It may then create a **profit center within the LGU office** with a separate cost accounting system. Under this arrangement, the LGU may directly manage the system or may enter into a **management contract** with a private party or a **service contract** with a private party to handle billing and collection and/or repair and maintenance. In these types of management arrangements, the LGU retains the responsibility for providing the service and assumes the commercial risks. Institutions such as neighboring water districts, cooperatives and other private institutions may be tapped by the LGU for these types of contracts.

Option 2: The LGU may enter into a **lease contract** with private party to operate and manage the system. Under this arrangement, the LGU finances the capital expenditures from its internal resources or from borrowings. The LGU then leases the facility to a private party, which assumes the commercial risks and the responsibility for operation and maintenance. the private of the LGU, any other charges contributing to the repayment of a loan which the LGU may have taken on behalf of the users.

Option 3: The LGU may enter into **concession contract** with a private party. Under this arrangement, the private party assumes the operations and management of the assets of the LGU, and

undertakes to expand and finance the services according to the terms and conditions of the contract. The private party is then allowed to operate the system, and recover its costs and earn a reasonable return on its investment from user fees. The private party also assumes the commercial risk. After the concession contract expires, the system reverts to the LGU, or may be contracted out again by the LGU.

Option 4: The LGU may create a **local water district**, in accordance with Presidential Decree No. 198, as amended.

Option 5: The LGU may form a **water company** to handle the provision of the service.

The LGU appoints the Board of Directors to be tapped from the private sector who would manage the company along commercial principles.

Options 6: The LGU may enter into contract with a private party under the **Build-Operate-Transfer scheme or any of its variants**, per Republic Act No. 6970, as amended, for the whole water system or a component of it (i.e., source development or distribution).

Option 7: The LGU may enter into a **joint venture agreement** with a private party in providing the service. Under this arrangement, both parties share in the risks of the project, as well as operate the water supply system through a shared management and organization structure.

In the contracts of LGUs with private parties, performance standards shall be stipulated including remedies for non-performance that are consistent with national regulatory laws.

The DILG, in its role of raising awareness of LGUs on opportunities in the sector, shall be responsible for informing the LGUs of these schemes, and in facilitating the implementation of the preferred option. **Annex D** provides a matrix of these various schemes.

RULE 8

COORDINATION AND COLLABORATION MECHANISMS

Article 28. Inter-LGU Collaboration. Provinces, cities, municipalities and barangays may assist, coordinate and collaborate with each other, as far as practicable, in the effort of improving the delivery of services to the Filipino people. The DILG shall take the lead in coordinating among the LGUs.

Article 29. Coordination Between Local and National Governments. LGUs may avail of the technical, financial and institutional expertise of national agencies like LWUA, DPWH, DILG, NWRB, DOH and DENR. DILG, as appropriate, shall coordinate with other national agencies on behalf of the LGUs.

**RULE 9
TRANSITION ARRANGEMENTS**

Article 30. Ongoing Projects. The DPWH, DOH and DILG shall continue to implement ongoing foreign-assisted Level I projects until the completion of such projects.

Article 31. Pipeline Projects. Projects in the pipeline shall conform to the provisions of this IRR to the extent possible.

**RULE 10
MISCELLANEOUS PROVISIONS**

Article 32. Applicability Clause. The application of this IRR shall be without prejudice to existing and future laws, rules, regulations, and/or international agreements entered into by the Philippine Government.

Article 33. Effectivity of the IRR. These Implementing Rules and Regulations shall take effect upon its approval by the NEDA Board, on recommendation by the Infrastructure Committee. It shall then be published in at least two national newspapers of general circulation.

Annex A

NEDA Board Resolution No. 5 (series of 1998)

**APPROVING THE IRR ON THE DELINEATION OF
RESPONSIBILITIES IN THE DEVELOPMENT AND
IMPLEMENTATION OF WATER
SUPPLY PROJECTS**

On motion duly seconded,

BE IT RESOLVED, as it is hereby resolved, to approve as it is hereby approved, the Implementing Rules and Regulations (IRR) on the Delineation of Responsibilities in the Development and Implementation of Water Supply Projects.

UNANIMOUSLY APPROVED, 17 March 1998.

NEDA Board Resolution No. 4 (series of 1994)

**APPROVING THE RECOMMENDATION OF THE
INFRASTRUCTURE
COMMITTEE (INFRACOM) ON THE REFORMS IN THE WATER
SUPPLY SECTOR**

On motion duly seconded,

BE ITS RESOLVED, as it is hereby resolved, to approve and confirm, as the same is hereby approved and confirmed the following recommendations of the INFRACOM:

- a. Registration with the National Water Resources board (NWRB) of all drilling and the extraction of water therefrom, irrespective of the use of extracted water and ownership of the land where the well is to be drilled. Amendment to Article 6 of the Water Code (PD No. 1067) shall be initiated by NWRB to this effect. Subsequently, NWRB shall formulate rules and regulations for the effective enforcement of these requirements within sixty (60) days after approval of the proposed amendment.
- b. Strengthening of the NWRB staff in order to effectively cope with the planning, monitoring and implementation activities of the water resources sector. NWRB shall submit an action plan to this effect to INFRACOM for review and endorsement to the President of the NEDA Board.
- c. Reorientation of the Local Water Utilities Administration (LWUA) to its original corporate mission as a "specialized lending institution" financing only viable water supply projects with tariff levels formulated towards full cost recovery. LWUA shall therefore upgrade its banking and finance expertise and immediately complete its financial restructuring. Further, it should radically improve its collection efficiency as well as its database and accounting systems.
- d. Privatization of all existing Water Districts (WDs) should be vigorously pursued whenever feasible and large commercially viable water services areas like Metro Manila, Cebu, Zamboanga, Davao should be formed or converted into SEC-style private water corporations, independent of LWUA and other government funding institutions by subject to regulation by NWRB.

- e. Procurement needs of WDs should be provided based on a competitive basis and not centrally imposed.
- f. LWUA shall submit an action plan to INFRACOM to effect the recommended reforms for review and endorsement.
- g. With respect to the delineation of responsibilities in the sector, NEDA Board Resolution No. 5 (series of 1998) is proposed to be amended to allow local government units (LGUs) to implement all levels of water supply projects consistent with government's decentralization and devolution process, mandating LWUA to implement only financially viable projects and further defining the roles of the agencies in the sector. The proposed amendment is as follows:

"Level I (point source system), Level II (communal faucet) and Level III (house connections?) water supply projects may be implemented by the concerned LGUs within their jurisdiction. LWUA shall implement only financially viable Level III water supply projects in areas outside the MWSS jurisdiction. DILG's participation will consist of general administration and institution building, such as assistance to the LGUs in the formation of Rural and/or Barangay Waterworks and Sanitation Associations (RWSAs/BWSAs) as well as in the identification of water supply systems. MWSS will be responsible for Level II water systems in Metro Manila and adjacent areas. DPWH, together with DILG and DOH, will provide technical assistance (within a period of about 2 years) to LGUs in the planning, implementation and operation and maintenance of water supply facilities".

UNANIMOUSLY APPROVED, 15 March 1994.

NEDA Board Resolution No. 6 (series of 1996)

**APPROVING THE RECOMMENDATIONS OF THE
INFRASTRUCTURE COMMITTEE (INFRACOM) ON THE
EXECUTING AGENCY ARRANGEMENT FOR THE DEVOLVED
INFRASTRUCTURE ACTIVITIES/FACILITIES**

On motion duly seconded,

BE IT RESOLVED as it is hereby resolved, to approve and confirm as the same is hereby approved and confirmed, the following recommendations of INFRACOM on national government (NG) assistance to Local Government Units (LGUs) in the implementation of devolved infrastructure activities/facilities under the Local Government Code in support of national priority programs in order to ensure efficiency, effectivity and more focused implementation consistent with the Government's decentralization and devolution objectives:

- a. DILG, which has administrative supervision over LGUs, shall be the lead national government agency (NGA) to oversee/administer NG assistance to LGUs in the implementation of devolved infrastructure programs/projects with the collaboration/participation of other concerned agencies. The identification and formulation of infrastructure programs/projects devolved to LGUs proposed for NG assistance shall therefore be coordinated with DILG to rationalize their development;
- b. The implementation of identified devolved infrastructure programs/projects shall be undertaken by the LGUs with DILG providing assistance in institution, capacity and capability building of the LGUs and with DPWH and other technical agencies providing and transferring technical expertise to the LGUs as necessary. The levels of capacities and capabilities of LGUs shall be determined by the DILG in coordination and collaboration with DPWH and other concerned agencies to determine, among others, the extent of support and assistance that these national agencies should provide in order to effect the successful implementation of devolved NG-assisted infrastructure programs/projects:
- c. DILG, as the lead agency, shall include in its annual budget the financial requirements necessary for the implementation of the identified and approved devolved infrastructure programs/projects. This shall be without prejudice to any future funds arrangement that the national government may

adopt with regard to NG assistance to LGUs for devolved projects particularly funds source from foreign loans and grants;

- d. For on-going and already committed devolved infrastructure programs/projects with NG assistance, the same shall be implemented with the previously identified NGA as lead in order not to disrupt is prosecution. However, there shall be phasing in at DILG and LGUs in the implementation arrangements for these devolved infrastructure projects in accordance with the provisions of this Resolution for purposes of policy and operational consistency and thus, effect a smooth transition;
- e. To efficiency and effectively implement the provisions of this Resolution, the INFRACOM shall formulate and periodically review the guidelines, rules and regulations that will already define the specific roles of the various concerned agencies in the implementation of NG assistance to LGUs for devolved infrastructure activities/utilities as well as the appropriate implementing mechanisms. In addition, INFRACOM shall likewise formulate the criteria and program for phasing out NG assistance to LGUs for devolved infrastructure activities/facilities;
- f. To carry out its tasks, the INFRACOM may request for financial and technical assistance form participating government agencies as well as from multilateral and bilateral sources; and
- g. The provisions of this Resolution shall apply to all NG assistance for devolved infrastructure activities/utilities unless otherwise explicitly provided for under the existing and future laws, such as the General Appropriations Act (GAA).

UNANIMOUSLY APPROVED, 12 March 1996.

MATRIX OF FINANCING AND MANAGEMENT OPTIONS

<u>Option</u>	<u>Description</u>
LGU-Financed and Managed	The LGU finances the investment from its income and other resources available to it (e.g., URA, locally-generated taxes, grants) or borrows from a financial institution. It then establishes a profit center within the LGU office with a separate cost accounting system. Under this arrangement, the LGU directly manages the operations of the system. The LGU assumes the commercial risk.
Service Contract	The LGU finances the investment and directly operates and manages the system. It enters into contract with a private party to undertake billing and collection and/or repair and maintenance activities for a fee. The LGU maintains a profit center within the LGU office and assumes the commercial risk.
Management Contract	The LGU finances the investment and enters into contract with a private party to manage the system. The private party collects the water tariffs set by the LGU, operates and manages the system and in turn, is paid a management fee by the LGU. The LGU maintains a profit center within the LGU office and assumes the commercial risk.
Lease Contract	The LGU finances the capital expenditures and leases the facility to the private sector. The private sector assumes the commercial risks and the responsibility for operation and maintenance. To recover its costs, the private party is allowed to collect user fees as well as any other charges on behalf of the LGU.
Concession Contract	The LGU enters into contract with a private party to undertake the investment. The private party assumes the assets of the LGU and undertakes to expand the services according to the terms and conditions of the contract. The private party is allowed to operate the system and to collect user fees to recover its costs and earn a reasonable return on its investment. After the contract expires, the system reverts to the LGU or may be contracted out again by the LGU.
Creation of a Local Water District	The LGU may create a local water district. The local water district finances the investment from a loan from the Local Water Utilities Administration (LWUA) and operates and manages the system. The local water district is then supervised by LWUA.
LGU Company	The LGU may form a water company to handle the provision of the service. The water company shall be duly

registered with the Securities and Exchange Commission (SEC) and shall have share holdings which can be sold to the private sector in the future. The LGU appoints the board members to be selected from the private sector who would then manage the company along commercial principles.

Build-Operate-Transfer or any of its variants (per RA 6970 as amended)

Under the BOT scheme, the private sector finances the investment, operates it for a certain period of time after which the asset is transferred to the LGU. The private party is allowed to collect user fees to recover its costs and earn a reasonable rate of return on its investment. The LGU and the BOT proponent negotiate on the risk sharing.

Joint Venture Agreement

Under a joint venture agreement, the LGU and the private party share in the risks of the project and operate the system through a shared management and organizational structure.

NEDA BOARD RESOLUTION

No. 5 (s. 1994)

**APPROVING THE RECOMMENDATION
OF THE INFRASTRUCTURE COMMITTEE
(INFRACOM) ON THE NATIONAL POLICY,
STRATEGY AND ACTION PLAN FOR
URBAN SEWERAGE (LIQUID WASTE)
AND SANITATION**

On motion duly seconded,

BE IT RESOLVED, as it hereby resolved to approve as the same is hereby approved and confirmed the following recommendations of the INFRACOM:

A. NATIONAL POLICY

1. Provision of improved sewerage/sanitation services in urban areas shall be considered a high priority.
2. On-site sanitation facilities for all urban households/establishments readily adaptable to further sewerage systems shall be required.
3. All new subdivisions/housing developments shall provide simplified or conventional sewerage system/sanitation facilities.
4. Conventional or low-cost sewerage for central business districts and for potentially high-income residential areas where economically and financially viable shall be provided.
5. Treatment of industrial as well as collected city/municipality wastewater to established standards set forth by the DENR prior to disposal into the drainage system shall be required.
6. Provision of services shall be based on consumer demand and willingness to pay.

B. NATIONAL STRATEGY

1. A sanitation/sewerage program and a Central Sanitation/Sewerage program Support Office (CPSO) to coordinate subsector activities at the national level and to assist LGUs to plan and manage sanitation/sewerage programs at the community level shall be established.

2. External sources of assistance shall be explored provided as may be appropriate to enable Municipal Development Fund (MDF) facility or other financing sources to extend loans to LGUs for sanitation and sewerage projects.
3. LGUs shall primarily be the implementors of the sanitation/sewerage programs with the national government providing assistance to develop their capacities in the following areas: community participation, sub-sector planning, program management, regulation of development, selection of technologies, financial management, construction supervision, O&M, monitoring and reporting.

C. ACTION PLAN

1. A CPSO shall be created and housed at LWUA with the LWUA Board exercising over-all jurisdiction over its operations. An Inter-departmental Advisory Committee (IAC) composed of representatives from DPWH, DOH, DILG, DOF, DBM, LWUA, DENR, MWSS and NEDA shall likewise be created and act as the coordination body in the implementation and monitoring of urban sewerage and sanitation programs particularly the five (5) pilot areas (Davao City, Calamba, Dagupan City, Roxas City and Cotabato City). The representatives to the IAC shall preferably be Asst. Sec. or Dir. level. The Chairman of the IAC and the Dir. of the CPSO shall be appointed by the LWUA Board.
2. LWUA shall fully staff the CPSO from within its existing manpower as soon as possible. An international institutional development consultant shall be engaged to assist the CPSO to design and implement the activities. The CPSO shall exist for a period of about 3 to 5 years or until after its functions have been fully devolved to the LGUs.

UNANIMOUSLY APPROVED, 15 March 1994.

Certified true copy:

FORTUNATO R. ABRENILLA
Acting Board Secretary
and Director, Legal Staff

