

**MINISTRY OF AGRICULTURE
PALESTINIAN WATER AUTHORITY
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**THE FEASIBILITY STUDY
ON
WATER RESOURCES DEVELOPMENT AND MANAGEMENT
IN
THE JORDAN RIVER RIFT VALLEY**

FINAL REPORT

**VOLUME-II
ANNEXES-A**

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**THE FEASIBILITY STUDY
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FINAL REPORT

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VOLUME-II

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HYDROLOGY



ANNEX 1 HYDROLOGY

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Hydrology

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Annex 1.1 Hydrology

1 Introduction

1.1 Hydrological Study Works Performed

The hydrological investigation has been carried out to work out the basic hydrological data required for the storm water harvesting plans in the Wadi Qilt and Wadi Far'a basins in accordance with the TOR on this Study. The main study works performed in relation to the hydrological investigation works are as follows:

- (i) To collect and arrange and analyze the meteorological and hydrological data from the concerned agencies in Palestine and Israel,
- (ii) To carry out the hydrological analysis to work out the hydrological data on the Wadi Qilt and Wadi Far'a,
- (iii) To carry out the flood analysis and sedimentation study, which include the estimate the probable floods and sedimentation rate in the Wadi Qilt and Wadi Far'a, respectively
- (iv) To estimate the potential water resources in each of the wadi basins in the study area, and
- (v) To install the new streamflow gauging stations on some of major wadis to provide the hydrological data for planning the storm water harvesting in the future

Out of the above hydrological investigation works, installation of the new streamflow gauging stations in item (v) could not be conducted in this Study due to the procedural issues that the JICA Study Team had encountered during the Study, although the JICA Study Team prepared the technical specifications to carry out the installation works on a local contract basis. The results of the above hydrological investigation works except for the technical specifications are presented in main Report.

This Annex 1 aims to present the detailed meteorological data, the procedures and results on hydrological analysis on the wadi Qilt and Wadi Far'a, including concepts of the Tank Model applied to the hydrological analysis on the Wadi Qilt, as well as the contents of the technical specifications on the new streamflow gauging stations which need to be installed in the near future in order to promote the feasibility study and subsequent installation of the water harvesting plans suggested in this Study.

1.2 The Study Area

In the Study Area, there are a numerous number of wadis, which are broadly demarcated into the nine (9) major wadi basins as shown in the table below and Figure 1.1.

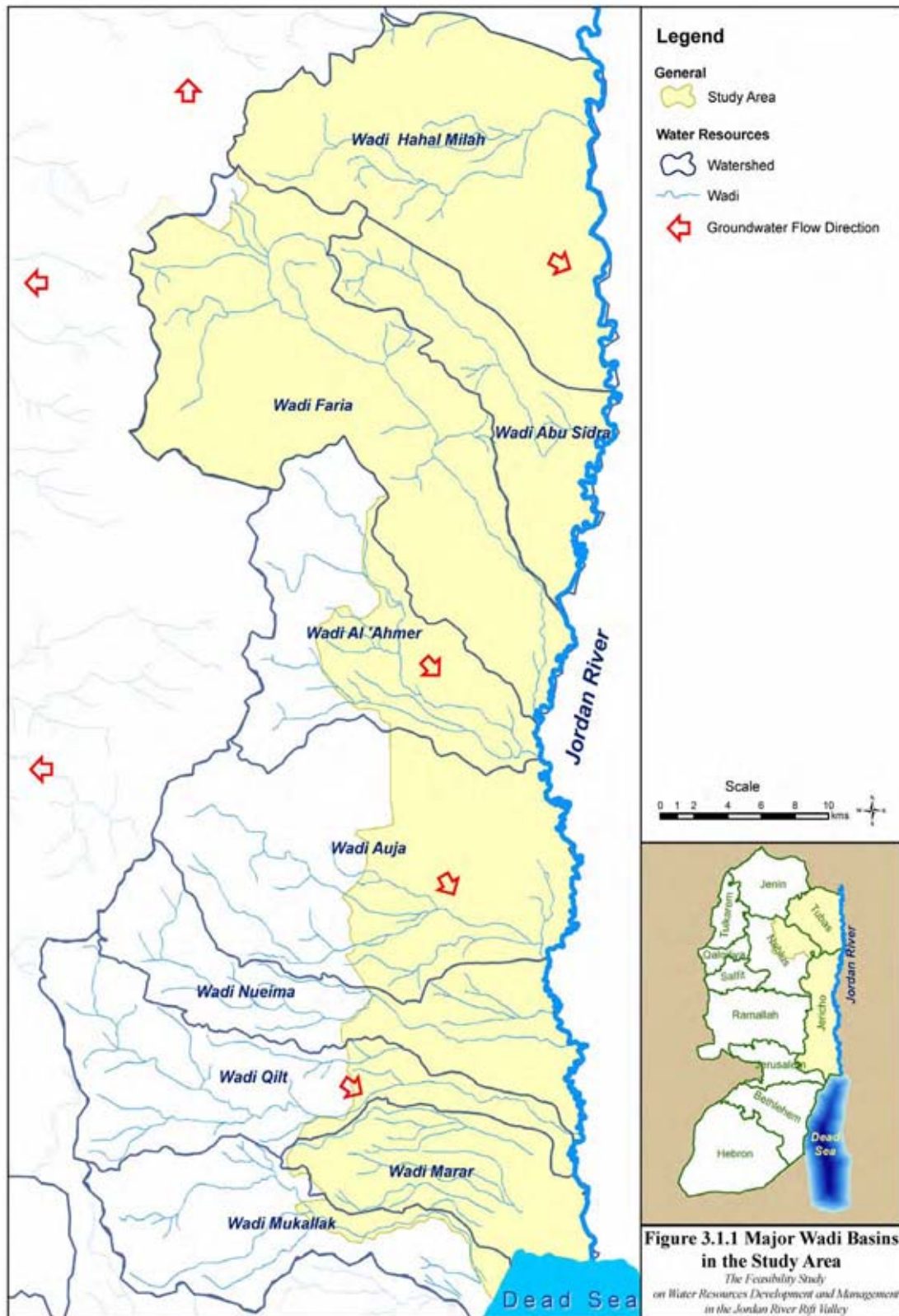
Major Wadi Basins in the Study Area

No.	Name of Wadi	Catchment Area (km ²)
1	Wadi Hahal Milah	270.9
2	Wadi Abu Sidra	117.8
3	Wadi Far'a	335.7
4	Wadi Al 'Ahmer	179.9
5	Wadi Auja	291.1
6	Wadi Nueima	152.2
7	Wadi Qilt	172.4
8	Wadi Marar	100.8
9	Wadi Mukallak	139.9
Total		1,760.7

As seen in the table above, the Wadi Fara occupies the largest catchment area of 340 km². The northern part of the Study Area including Wadi Fara basin is blessed with the comparatively abundant vegetation as well as water resources. In the southern wadi basins, on the other hand, the ratios of low-lying flat and desert areas with annual rainfall of less than 300 mm become relatively larger. Out of catchment areas shown in the table above, rainfall in the desert areas hardly contribute to the yield of water resources, since monthly evaporation amount therein exceeds monthly rainfall throughout a year. Concerning development of the storm water harvesting, the previous study¹ identified that, out of the nine (9) major wadi basins, the two (2) wadi basins, the Wadi Qilt and Wadi Fara, are the most promising.

The major water resources that are exploitable in the Study area are spring water and groundwater. The spring water amount constitutes one of the important water resources in the Study Area. It becomes very less in the summer season, while it remarkably increases in the winter season. Thus, the spring water amount largely varies in response to the rainfall amount. On the other hand, it deems that the groundwater amount responds to the rainfall amount with some time lag, approximately one (1) to two (2) years, depending on the geological conditions at each location.

Figure 1.1 also shows the overall directions of groundwater movement in the Study Area. In general, the watersheds of surface water don't coincide with the boundaries of groundwater and spring water. In the Study Area, the groundwater boundaries lie in the central mountainous area where higher annual rainfall of 500 to 900 mm takes place. In the boundary zones, the groundwater generally moves in the two (2) different directions, the westward and eastward. On the other hand, in the northern parts of the Study Area including the Wadi Fara, some of groundwater moves into the northern direction.



Source: PWA, MoP

Figure 1.1 Major Wadi Basins in the Study Area

2 Meteorology

2.1 Data Collection

The meteo-hydrological data are collected from the following organizations in the First Field Work stage:

- i) PWA: Daily rainfall in the database, which covers rainfall stations existing in the whole Palestine area
- ii) Meteorological Office under the Ministry of Transport: Meteorological records
- iii) Najah University: Hourly rainfall and hourly discharge in the Wadi Far'a basin

The additional meteo-hydrological data collection has been performed in the Second Field Work stage to supplement those collected in the First Field Work stage.

Usually, the following organizations are main organizations concerned with meteo-hydrological observation in Palestine:

- Palestine Meteorological Department
- Palestine Water Authority (PWA)
- Palestine Hydrological Group (PHG)

2.2 Meteorological Records

The Palestine Meteorological Department is operating three (3) synoptic stations in the study area, namely Jericho, Nablus, Ramallah. The meteorological records observed in Palestine are as follows:

- Temperature
- Relative humidity
- Daily sunshine hours
- Evaporation
- Wind velocity and run
- Atmospheric pressure

The meteorological records at Jericho and Nablus are shown in Tables 2.1 and 2.2, respectively. The main office of the Palestine Meteorological Department is in Ramallah, and is also in charge of operating the rain gauges in Palestine and collecting and arranging the observed data.

Table 2.1 Meteorological Data Recorded at Jericho (1/3)

(1) Mean Air Temperatures

(Unit: °C)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Ann. Mean
1994	-	-	-	-	16.0	15.1	17.6	24.6	27.2	28.8	30.5	-	-
1995	29.6	25.1	17.6	14.4	13.5	14.6	18.1	21.4	26.5	30.0	30.8	31.3	22.8
1996	29.4	24.7	21.1	15.7	13.9	15.6	16.8	20.9	27.2	22.0	31.7	31.4	22.6
1997	28.2	25.2	20.3	15.3	13.8	12.2	15.4	20.3	27.4	29.7	31.3	29.8	22.4
1998	30.5	26.4	21.6	16.8	13.1	14.8	16.8	23.7	27.1	29.6	31.7	33.1	23.8
1999	30.2	26.6	20.1	15.3	14.8	16.0	19.0	22.4	28.2	29.7	31.6	32.3	23.9
2000	29.6	25.3	19.7	16.4	13.2	14.7	16.9	23.3	26.4	30.3	33.3	32.9	23.5
2001	29.8	26.4	19.6	15.3	14.2	14.6	22.3	24.1	27.2	30.7	32.0	32.2	24.1
2002	28.9	25.5	18.6	14.3	13.1	12.5	19.3	20.6	26.9	28.0	33.5	31.0	22.7
2003	29.4	26.5	21.1	15.4	14.6	14.2	16.1	21.8	30.4	30.2	31.7	32.3	23.7
2004	-	-	-	-	13.9	15.2	20.1	23.2	26.3	29.4	32.4	31.3	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	14.1	14.8	21.3	23.2	26.3	29.4	32.4	31.3	-
2007	-	-	-	-	14.3	16.0	18.2	-	-	-	-	-	-
Mean	29.5	26.0	20.1	15.6	13.9	14.5	18.5	22.5	27.3	29.7	32.2	31.8	23.4

Note: "-" means that the data is not available.

(2) Mean Relative Humidity

(Unit: %)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Ann. Mean
1994	-	-	-	-	-	-	-	-	47.9	47.6	47.1	-	-
1995	51.2	54.7	59.8	71.4	74.6	72.4	59.4	49.4	44.8	44.4	47.7	49.9	56.6
1996	50.2	53.0	55.9	72.7	75.7	71.7	68.0	54.9	46.9	57.0	48.6	51.9	58.9
1997	51.4	56.9	64.6	75.9	72.0	68.8	64.5	50.7	40.2	42.5	43.6	50.3	56.8
1998	47.3	49.7	61.2	57.0	76.2	67.9	58.5	47.2	43.5	45.1	43.6	48.8	53.8
1999	48.5	52.7	54.0	61.1	66.0	60.1	50.2	45.3	39.5	47.5	44.6	47.7	51.4
2000	49.0	54.1	50.7	71.3	67.5	62.4	60.9	47.3	40.9	40.3	42.2	47.6	52.9
2001	52.5	54.3	59.8	73.0	67.1	68.0	43.9	42.7	37.2	36.6	41.1	50.8	52.2
2002	40.6	59.2	54.2	77.1	72.1	53.5	58.0	44.0	46.5	43.1	43.6	49.5	53.5
2003	50.4	53.1	55.6	70.2	73.9	68.1	66.4	50.5	32.6	43.3	44.2	47.7	54.6
2004	-	-	-	-	71.3	67.4	52.0	41.8	40.6	44.9	41.8	48.4	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	71.3	70.0	54.0	42.0	40.6	44.9	41.8	48.4	-
2007	-	-	-	-	62.4	65.5	57.2	-	-	-	-	-	-
Mean	48.5	54.3	57.1	69.4	70.0	65.2	56.6	45.7	40.2	43.1	42.9	48.8	53.6

Note: "-" means that the data is not available.

Table 2.1 Meteorological Data Recorded at Jericho (2/3)

(3) Mean Daily Sunshine Hours

(Unit: hours/day)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Ann. Mean
1994	-	-	-	-	5.2	6.9	7.7	9.2	11.0	12.0	11.8	-	-
1995	10.1	9.3	7.6	6.5	7.1	6.3	8.5	9.5	10.9	12.0	11.8	11.7	9.3
1996	10.4	8.5	6.8	5.6	5.2	6.0	7.5	9.2	10.8	-	11.4	11.5	12.9
1997	10.3	7.7	6.6	5.2	6.0	7.4	6.9	8.6	11.3	11.7	12.0	11.7	8.8
1998	9.7	9.1	7.3	5.2	4.8	6.5	6.4	9.4	9.2	11.7	11.7	11.0	8.5
1999	10.2	8.7	8.0	6.3	5.8	6.6	7.9	9.3	10.6	11.6	11.7	11.2	9.0
2000	10.4	8.1	7.9	5.8	5.6	7.2	8.1	8.9	11.5	12.0	11.4	11.3	9.0
2001	10.1	8.6	6.6	5.7	6.6	6.8	8.9	8.7	10.6	12.0	11.9	11.4	9.0
2002	9.9	7.8	7.0	5.1	5.7	6.7	7.9	7.7	11.0	11.6	11.7	11.4	8.6
2003	10.5	8.8	7.5	5.3	5.7	5.1	6.5	8.3	10.5	12.0	12.0	11.5	8.7
2004	-	-	-	-	5.7	6.9	8.0	9.3	9.8	11.9	11.8	11.3	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	5.7	6.8	8.6	9.3	9.8	11.9	11.8	11.3	-
2007	-	-	-	-	6.3	6.3	7.2	-	-	-	-	-	-
Mean	10.1	8.4	7.3	5.5	5.8	6.6	7.6	8.8	10.5	11.8	11.8	11.3	8.8

Note: "-" means that the data is not available.

(4) Mean Daily Evaporation

(Unit: mm/day)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Ann. Mean
1994	-	-	-	-	2.0	2.7	3.7	6.9	8.5	9.0	9.5	-	-
1995	6.9	4.8	3.1	1.8	1.6	2.2	3.9	5.8	7.9	9.1	9.3	8.5	5.4
1996	7.0	4.7	3.2	2.1	1.8	2.3	-	5.3	7.9	55.3	8.9	8.3	-
1997	7.1	4.4	3.0	1.8	1.9	2.3	3.1	5.8	8.5	9.3	9.6	8.6	5.4
1998	7.5	5.2	3.1	2.4	1.5	2.4	3.7	6.6	8.0	9.0	9.7	8.9	5.7
1999	7.1	4.9	3.3	2.1	2.0	2.7	4.7	6.4	8.9	9.2	9.7	8.5	5.8
2000	7.2	4.8	3.1	2.0	2.1	2.7	3.8	6.2	8.1	9.6	9.6	8.5	5.6
2001	7.0	5.0	2.9	1.9	1.9	2.3	5.2	6.4	8.4	9.7	9.7	8.8	5.8
2002	7.4	5.0	3.2	1.9	1.8	2.5	4.6	5.4	7.6	9.0	10.1	9.0	5.6
2003	7.4	5.3	3.4	2.3	1.7	2.7	3.1	5.9	9.7	9.7	10.1	8.8	5.8
2004	-	-	-	-	2.0	2.7	4.6	6.7	8.0	9.3	10.0	8.8	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	2.1	2.4	4.2	6.7	8.0	9.3	10.0	8.8	-
2007	-	-	-	-	2.0	2.6	4.1	-	-	-	-	-	-
Mean	7.2	4.9	3.1	2.1	1.9	2.5	4.1	6.2	8.4	9.4	9.8	8.7	5.7

Note: "-" means that the data is not available.

Table 2.1 Meteorological Data Recorded at Jericho (3/3)

(5) Maximum Daily Wind Velocity

(Unit: m/sec)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Ann. Mean
1994	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	14.5	9.3	8.0	22.5	9.0	15.0	21.5	26.5	13.8	13.3	14.8	16.5	15.4
2003	12.3	19.5	15.2	24.2	12.0	27.2	22.3	19.5	22.0	13.5	16.5	11.7	17.9
2004	-	-	-	-	21.7	18.5	14.0	18.5	17.5	12.2	14.2	13.0	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	21.7	18.5	14.0	18.5	17.5	12.2	14.2	13.0	-
2007	-	-	-	-	18.2	15.7	18.0	-	-	-	-	-	-
Mean	13.4	14.4	11.6	23.4	16.5	19.0	18.0	20.8	17.7	12.8	14.9	13.6	16.7

Note: "-" means that the data is not available.

(6) Mean Atmospheric Pressure

(Unit: mb)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Ann. Mean
1994	-	-	-	-	1,046	1,047	1,044	1,040	1,038	1,036	1,033	-	-
1995	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	1,038	1,040	1,043	1,046	1,046	1,049	1,042	1,041	1,038	1,033	1,032	1,035	1,040
1998	1,035	1,040	1,042	1,046	1,046	1,046	1,043	1,040	1,037	1,036	1,031	1,031	1,039
1999	1,035	1,039	1,044	1,046	1,044	1,044	1,040	1,041	1,037	1,034	1,031	1,032	1,039
2000	1,035	1,040	1,043	1,044	1,045	1,047	1,045	1,038	1,037	1,033	1,030	1,032	1,039
2001	1,035	1,039	1,043	1,044	1,046	1,044	1,039	1,039	1,035	1,033	1,030	1,032	1,038
2002	976	1,038	1,044	1,045	1,048	861	1,037	977	1,037	972	1,031	1,033	1,009
2003	1,036	-	1,042	1,044	1,045	1,042	1,041	1,038	1,035	1,033	1,030	1,032	-
2004	-	-	-	-	1,041	1,045	1,014	1,038	1,036	937	1,030	1,032	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	1,043	1,045	1,042	1,038	1,036	1,035	1,030	1,032	-
2007	-	-	-	-	1,046	1,040	1,040	-	-	-	-	-	-
Mean	1,027	1,039	1,043	1,045	1,045	1,028	1,039	1,033	1,037	1,018	1,031	1,032	1,035

Note: "-" means that the data is not available.

Table 2.1 Meteorological Data Recorded at Nablus (1/2)

(1) Mean Air Temperatures

(Unit: °C)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Ann. Mean
1997	24.0	20.8	16.4	11.9	11.1	8.3	10.3	15.4	22.9	24.5	23.1	23.9	17.8
1998	24.3	21.6	18.4	13.3	9.6	10.6	11.3	17.9	20.7	22.5	25.2	25.9	18.5
1999	24.0	20.9	17.0	13.4	10.9	11.5	13.8	16.5	21.8	22.8	24.6	25.5	18.6
2000	23.2	20.3	16.6	11.9	8.7	9.7	11.5	18.2	20.3	23.6	26.4	24.7	17.9
2001	23.6	20.7	15.5	11.9	11.0	10.8	17.2	18.2	20.8	23.9	25.2	25.4	18.7
2002	-	-	-	-	-	12.7	15.8	-	19.8	-	-	-	-
2003	23.1	21.6	17.5	11.7	-	-	-	-	21.8	24.7	25.8	24.8	-
2004	-	-	-	-	10.0	11.0	15.2	17.6	20.0	22.6	25.4	24.2	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	9.8	11.5	13.6	16.6	20.0	23.3	24.3	25.6	-
2007	-	-	-	-	10.1	10.7	12.5	15.9	21.9	-	-	-	-
Mean	23.7	21.0	16.9	12.4	10.1	10.8	13.5	17.0	21.0	23.5	25.0	25.0	18.3

Note: "-" means that the data is not available.

(2) Mean Relative Humidity

(Unit: %)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Ann. Mean
1997	56.5	57.6	62.4	74.1	65.3	68.2	67.7	51.9	56.5	60.5	67.0	56.1	62.0
1998	59.6	53.7	60.7	58.4	75.7	69.3	67.4	54.9	52.4	59.8	52.2	65.5	60.8
1999	64.1	65.5	54.6	56.6	68.6	64.2	60.8	55.9	48.7	63.0	63.5	64.3	60.8
2000	66.9	64.2	49.9	73.5	74.8	71.1	69.8	55.3	51.2	57.0	59.1	69.7	63.6
2001	68.9	68.4	66.0	70.6	67.1	70.7	53.2	54.9	53.3	50.4	61.2	67.7	62.7
2002	-	-	-	-	-	54.0	57.0	-	-	-	-	-	-
2003	63.0	61.0	60.0	70.0	-	-	-	-	34.0	54.0	55.0	67.0	-
2004	-	-	-	-	74.1	70.7	57.0	49.3	51.3	60.0	56.4	65.7	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	65.9	74.1	67.5	62.0	53.9	-	-	-	-
Mean	63.2	61.7	58.9	67.2	70.2	67.8	62.5	54.9	50.2	57.8	59.2	65.1	61.6

Note: "-" means that the data is not available.

Table 2.1 Meteorological Data Recorded at Nablus (2/2)

(3) Mean Daily Evaporation

(Unit: mm/day)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Ann. Mean
1997	-	4.6	3.0	2.0	2.2	2.4	3.3	5.2	8.5	8.9	7.4	-	-
1998	6.8	5.5	3.5	2.4	1.8	2.6	3.3	5.4	7.1	7.9	9.3	7.7	5.3
1999	6.2	4.2	3.5	2.6	2.2	2.6	3.8	5.2	7.8	7.5	7.9	7.3	5.1
2000	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	5.8	4.2	2.8	2.1	2.2	2.7	4.9	7.3	7.6	8.3	8.2	6.7	5.2
2002	-	-	-	-	-	3.5	4.2	4.4	6.3	8.6	-	-	-
2003	6.4	4.7	4.5	2.6	-	-	1.5	4.1	7.5	8.1	8.2	6.7	-
2004	-	-	-	-	2.7	2.7	4.9	6.2	7.4	8.0	8.6	7.2	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	2.3	3.5	4.3	5.0	7.0	8.3	7.7	7.7	-
2007	-	-	-	-	2.8	2.7	3.8	5.1	-	-	-	-	-
Mean	6.3	4.6	3.5	2.4	2.3	2.8	3.8	5.3	7.4	8.2	8.2	7.2	5.2

(4) Mean Atmospheric Pressure

(Unit: mb)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Ann. Mean
1997	949	954	956	958	-	-	-	-	949	948	951	949	-
1998	951	954	955	956	957	957	955	953	952	949	946	947	953
1999	950	953	956	957	954	954	952	954	952	949	946	947	952
2000	950	954	955	955	953	955	955	951	951	949	946	948	952
2001	951	954	956	956	956	954	953	953	950	949	947	948	952
2002	-	-	-	-	-	957	953	-	-	-	-	-	-
2003	953	954	954	954	-	-	-	-	952	950	948	949	-
2004	-	-	-	-	951	955	954	951	950	950	947	948	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	954	952	951	949	950	949	947	946	-
2007	-	-	-	-	956	951	951	949	948	-	-	-	-
Mean	951	954	955	956	954	954	953	951	950	949	947	948	952

2.3 Rainfall Records

In the initial period of the First Field Work of this Study, the JICA Study Team visited the head office of the Palestine Meteorological Department in Ramallah to gather the rainfall data in Palestine. However, the in-charge personnel of the Department informed to the JICA Study Team that the whole rainfall data on a daily data basis have been handed over to the PWA every year and that the JICA Study Team should get the rainfall data from the PWA.

In accordance with the instructions mentioned above, the JICA Study Team determined to collect the rainfall data from the concerned department of PWA, although it is hard to check the data accuracy unless it is checked and collated with the original records. The PWA set up its own database to store the long-term rainfall data. The JICA Study Team got from the concerned department of PWA the two (2) excel files which contain the rainfall data observed at all rainfall stations in Palestine between 1954 and 2005.

On the other hand, the data in the two (2) excel files contained a large quantity of daily rainfall data which are not arranged in the yearly format. For the reason, The JICA Study Team prepared new computer programs with a software of Fortran in order to arrange the long-term daily rainfall data contained in the two (2) excel in the format of yearly table. As the first step, they are first transformed into text files to utilize the data in the excel files as the input data. With the Fortran program, it is found out that the daily rainfall data at a total of 93 rainfall stations are stored in the PWA's database.

The annual rainfalls at the 93 rainfall stations between 1953/1954 and 2005/06 that are computed by the Fortran Program are shown in Table 2.1. An isohyetal map of the study area is shown in Figure 2.1. The available periods of daily rainfall data at those rainfall stations are shown in Figure 2.2. As seen in the table, there are a lot of interrupted periods of rainfall observation at these rainfall stations.

Out of the 93 rainfall stations shown in Table 2.1, some stations have sopped observing rainfall records. Table 2.2 lists the rainfall stations in Palestine that are registered at the present time by Palestine Meteorological Department as the operational ones. The locations of these rainfall stations are shown in Figure 2.3.

2.4 Issues and Problems on Present Meteorological Observation System

During the Study period, the JICA Study Team discussed with the in-charge personnel of the Palestine Meteorological Department with respect to the present meteorological observation and data collection system.

Except for the synoptic stations, the Department has so far performed the rainfall observation by entrusting it to schools in the municipalities in Palestine. According to the staff in-charge of the Palestine Meteorological Department, a lot of meteorological observation equipment has superannuated, requiring the urgent rehabilitation. The Palestine Meteorological Department also informed to the JICA Study Team that the Department is strongly willing to establish the modernized meteorological observation system in terms of observation equipment and data arrangement system.

Table 4.2.1 Annual Rainfall Record (1/4)

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Code No.	00000011	00000002	00000003	00000004	00000005	00000006	00000007	00000008	00000009	00000010	00000011	00000012	00000013	00000014	00000015	00000016	00000017	00000018	00000020	00000021	00000022	00000023	00000024	00000025
Location	Bassam A. S. P. (Sch.)	Jenin P. (Sch.)	Bir Zeit (Sch.)	Al S. (Sch.)	Bet. P. (Sch.)	Zatara B. Sch.	W. Bank W. Bank W. Dpt. - Jerusalem - Al Bira	W. Bank W. Bank W. Dpt. - Jerusalem - Al Bira	American Colony	Qabatiya S. B. Sch. B. Sch.	Qabatiya S. B. Sch. B. Sch.	Tubas Municip.	Met. Sta. Met. Sta. B. Sch.	Kafr Zibad S. B. Sch.	Jericho Met. Sta. (Artha)	Jericho Nurs.	Anabta S. G.Sc.	Ein Al Farah	W. R. and P. Dnt Al Bira	Burqa PHG	Beit Daj. PHG	Baqa ash. S.-PHG	Fakhia PHG	Anabur- PHG
Place	Balata Camp	Jenin	Bir Zeit	Qalqiya (Beit I-shm)	Beth. (Beit I-shm)	Zatara	Jerusalem - Al Bira	Jerusalem - Al Bira	Jerusalem	Qabatiya	Qabatiya	Tubas	Wadi Al Far'a	Kafr Zibad	Jericho (Artha)	Jericho (Artha)	Anabta	Ras Al-Far'a	Beit Daj. Dejan	Burqa	Beit Daj. Dejan	Baqa ash. Sharqiya	Fakhia	Anabta
Region	Nablus	Jenin	Ramallah	Qalqiya	Bethlehem	Behlehem	Jerusalem	Ramallah	Jenin	Ramallah	Tubas	Tubas	Tubas	Tulkarm	Jericho	Jericho	Tulkarm	Tubas	Ramallah	Nablus	Nablus	Tulkarm	Salfit	Tulkarm
1953-54		277.2																						
1954-55		411.3																						
1955-56		431.1																						
1956-57		333.0																						
1957-58		625.0																						
1958-59		288.5																						
1959-60		273.3																						
1960-61		340.6																						
1961-62		652.8																						
1962-63		368.6																						
1963-64		356.5																						
1964-65		356.1																						
1965-66		458.0																						
1966-67		613.6																						
1967-68		183.4																						
1968-69		599.5																						
1969-70		1,041.0																						
1970-71		585.0																						
1971-72		246.1																						
1972-73		398.4																						
1973-74		510.3																						
1974-75		784.5																						
1975-76		467.5																						
1976-77		548.5																						
1977-78		435.7																						
1978-79		572.1																						
1979-80		397.2																						
1980-81		774.8																						
1981-82		578.6																						
1982-83		1,397.5																						
1983-84		81.3																						
1984-85		457.9																						
1985-86		418.4																						
1986-87		733.0																						
1987-88		481.7																						
1988-89		1,052.7																						
1989-90		599.0																						
1990-91		9.5																						
1991-92		525.8																						
1992-93		1,168.7																						
1993-94		363.2																						
1994-95		958.8																						
1995-96		251.0																						
1996-97		74.0																						
1997-98		287.0																						
1998-99																								
1999-00																								
2000-01																								
2001-02																								
2002-03																								
2003-04																								
2004-05																								
2005-06																								
Mean		544.2																						

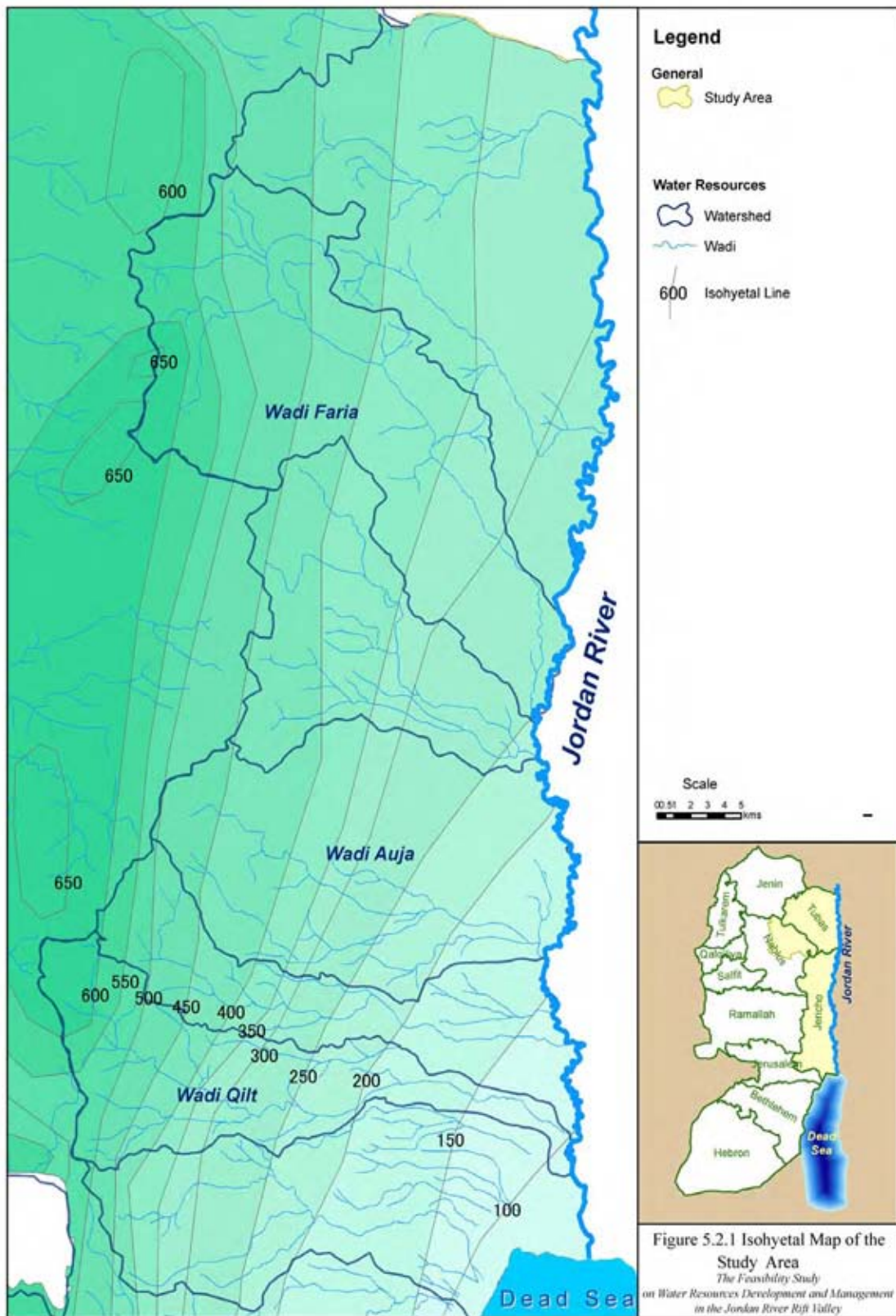
Table 2.4 List of Rainfall Stations in the West Bank (Functional Stations Only)

No.	Station Code	Coordinates/Ground Level (m)			Locality	Start Date	Max. Of RMR Year	Status	Type	Ownership
		X	Y	Z						
1	0000003	169.00	153.00	780	Bir Zeit	1954	2002	Working	Manual	MD
2	0000004	146.90	177.30	58	Qalqilya	1954	2003	Working	Manual	MD
3	0000006	174.45	120.00	600	Za'tara	1954	2003	Working	Manual	MD
4	0000008	170.17	150.90	870	Al Bira	1954	2003	Working	Manual	PWA
5	0000010	175.00	202.00	300	Qabatiya	1954	2003	Working	Manual	MD
6	0000014	157.10	181.00	195	Kafr Zibad	1954	2003	Working	Manual	MD
7	0000015	194.00	140.20	-260	Jericho (Ariha)	1954	2003	Working	Full Automatic	MD
8	0000017	161.20	190.40	160	'Anabta	1955	2003	Working	Manual	MD
9	0000020	170	146	850	Al Bira	1958	2003	Working	Manual	PWA
10	0000022	185	178	520	Beit Dajan	1960	2000	Working	Tipping Bucket	PHG
11	0000023	157	202	100	Baqa ash Sharqiya	1962	2000	Working	Tipping Bucket	PHG
12	0000024	165	164	750	Farkha	1962	2000	Working	Tipping Bucket	PHG
13	0000025	161	190	170	'Anabta	1962	2000	Working	Tipping Bucket	PHG
14	0000026	182	188	165	Wadi Al Far'a	1962	1999	Working	Tipping Bucket	PHG
15	0000027	162	158	570	An Nabi Saleh	1963	2000	Working	Tipping Bucket	PHG
16	0000028	154	155	300	Shuqba	1963	2003	Working	Manual	MD
17	0000029	145	99	480	Al Majd	1963	2003	Working	Manual	MD
18	0000030	161	199	350	Seida	1963	2003	Working	Manual	MD
19	0000031	148	107	460	Ithna	1963	2003	Working	Manual	MD
20	0000032	162	185	420	Beit Lid	1963	2003	Working	Manual	MD
21	0221970	169.50	214.50	180	Rummana	1963	2003	Working	Manual	MD
22	0240150	178.50	207.50	138	Jenin	1966	2002	Working	Full Automatic	MD
23	0240200	164.00	206.00	350	Ya'bad	1967	2003	Working	Manual	MD
24	0240220	158.20	204.50	100	Qaffin	1968	2003	Working	Manual	MD
25	0240250	169.10	201.50	340	Arraba	1968	2003	Working	Manual	MD
26	0240350	186.50	199.30	500	Raba	1968	2003	Working	Manual	MD
27	0240400	157.00	197.30	110	'Attil	1968	2003	Working	Manual	MD
28	0240450	164.80	198.00	400	Kafr Ra'I	1968	2003	Working	Manual	MD
29	0240480	157.00	195.00	190	Deir al Ghusun	1968	2003	Working	Manual	MD
30	0240500	176.80	194.80	415	Meithalun	1968	2003	Working	Manual	MD
31	0240501	176.00	194.80	410	Meithalun	1968	2001	Working	Manual	MD
32	0240650	152.50	191.00	65	Tulkarm	1968	2003	Working	Manual	MD
33	0240700	161.20	190.40	160	'Anabta	1968	2000	Working	Tipping Bucket	PHG
34	0240751	168.50	189.80	600	Burqa	1968	2003	Working	Manual	MD
35	0240850	168.50	187.00	335	Sabastiya	1968	2003	Working	Manual	MD
36	0240900	186.50	187.80	340	Tammun	1968	2003	Working	Manual	MD
37	0240950	178.00	186.30	500	Talluza	1968	2003	Working	Manual	MD
38	0240990	169.50	185.60	430	An Naqura	1968	2003	Working	Manual	MD
39	0241030	163.50	181.00	400	Kafr Qaddum	1968	2003	Working	Manual	MD
40	0241061	175.00	180.00	533	Nablus	1968	2003	Working	Full Automatic	MD
41	0241140	162.50	178.00	350	Hajja	1968	2003	Working	Manual	MD
42	0241150	185.30	177.80	520	Beit Dajan	1968	2003	Working	Manual	MD
43	0241170	173.70	177.00	675	Burin	1968	2003	Working	Manual	MD
44	0241200	162.50	176.30	430	Jinsafut	1968	2003	Working	Manual	MD
45	0241250	155.50	175.90	260	Azzun	1968	2003	Working	Manual	MD
46	0241300	163.40	170.80	432	Deir Istiya	1968	2003	Working	Manual	MD
47	0241350	182.70	170.50	630	Aqraba	1970	2003	Working	Manual	MD
48	0241400	157.50	169.00	315	Biddya	1970	2003	Working	Manual	MD
49	0241415	172.00	168.00	600	Yasuf	1972	2003	Working	Manual	MD
50	0241450	167.00	165.50	520	Salfit	1972	2003	Working	Manual	MD
51	0241470	177.80	164.00	790	Qaryut	1973	2003	Working	Manual	MD
52	0241630	169.00	157.00	500	'Atara	1976	1998	Working	Manual	MD
53	0241900	164.20	151.00	600	Al Mazra'a al Qibliya	1980	2003	Working	Manual	MD
54	0242400	166.00	143.70	810	Beituniya	1992	2003	Working	Manual	MD
55	0246800	168.00	125.00	825	Bethlehem (Beit Lahm)	1998	2003	Working	Manual	MD
56	0247430	162.70	115.70	860	Al'Arrub Camp	1998	2001	Working	Manual	MD
57	0247920	151.00	109.00	500	Tarqumiya	1998	2003	Working	Manual	MD
58	0248141	159.70	104.00	1005	Hebron (Al Khalil)	1998	2003	Working	Full Automatic	MD
59	0248250	152.50	101.70	884	Dura	1999	2003	Working	Manual	MD
60	0248280	158.50	95.00	820	Yatta	2000	2003	Working	Manual	MD

MD: Palestine Meteorological Department

PWA: Palestine Water Authority

PHG: Palestine Hydrological Group.



Source: PWA

Figure 2.1 Isohyetal Map of the Study Area

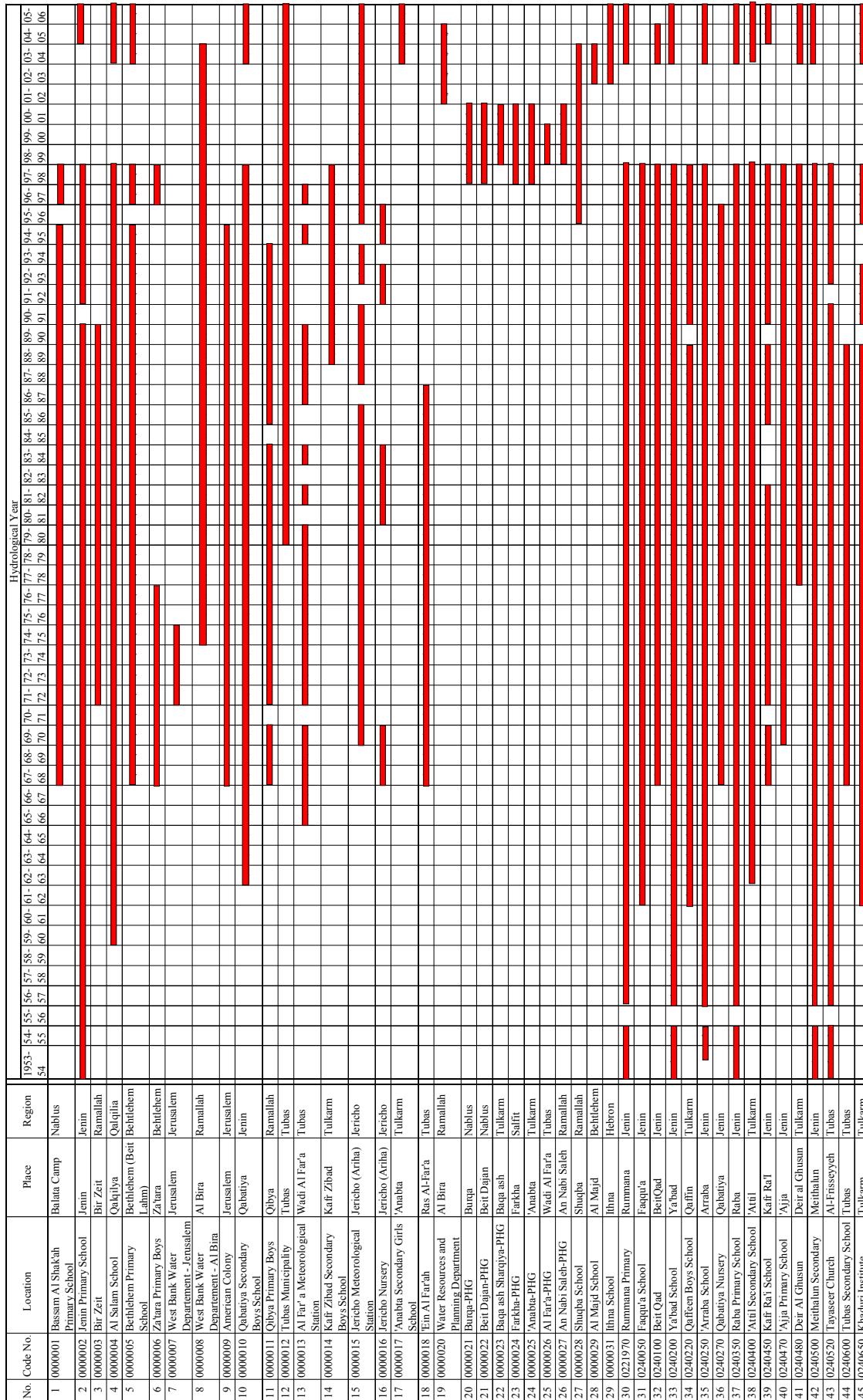


Figure .2.2 Available Periods of Daily Rainfall Data (1/2)

Source: PWA, Meteorological Department



Source: Palestine Meteorological Department, Palestine Water Authority, Palestine Hydrological Group

Figure 2.3 Location of Functional Rainfall Station in Palestine

Since the meteorological data including rainfall data are essential for clarifying the potential water resources, it is recommended to establish the appropriate observation system as soon as possible.

As seen in Figure 2.3 and Table 2.1, the present meteorological observation system has the following issues and problems:

- The locations of existing rainfall stations are unevenly distributed with the comparatively higher densities in highly elevated areas and the lower densities in low-lying areas,
- The number of synoptic stations in and around the study area is very less at four (4) in total, while the meteorological data, especially evaporation data, are very important for estimating the potential water resources in the study area,
- There are many interruption and inconsistent values of the meteorological records since the start of the observation, although the Palestine Meteorological Department entrust to schools the observation at many rainfall stations,

2.5 Rainfall Analysis

To interoperate the rainfall data for the interrupted periods of rainfall observation, a double curve method is adopted. The following simple linear relationship between the accumulated annual rainfalls at two different rainfall stations is constructed:

$$R_a = r \times R_b$$

Where, R_a ; Accumulated rainfall amount at Station-A (mm)

- do -

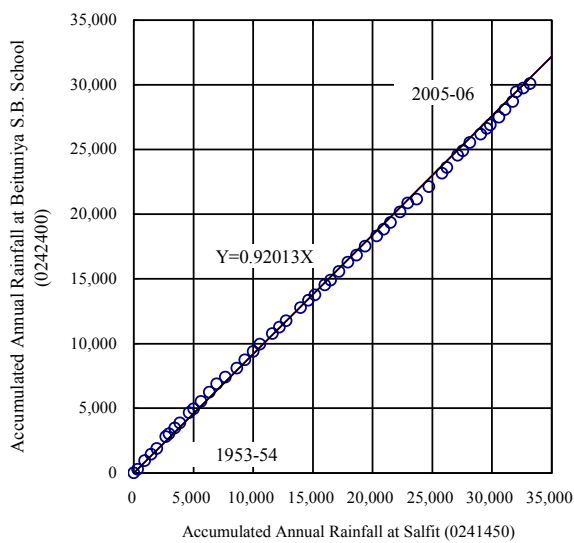
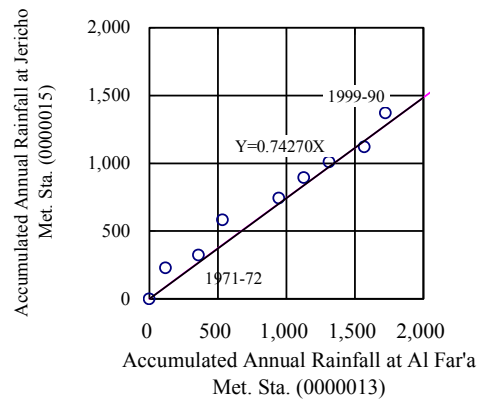
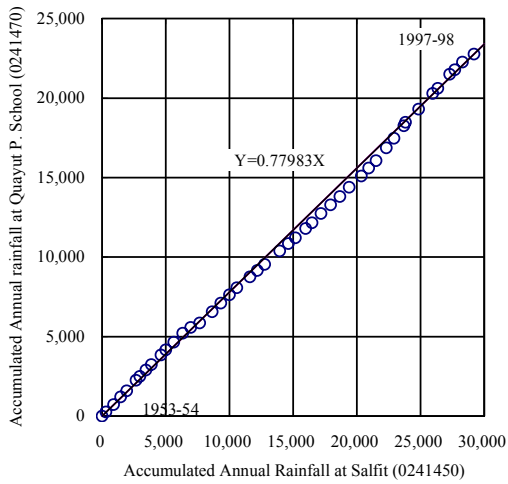
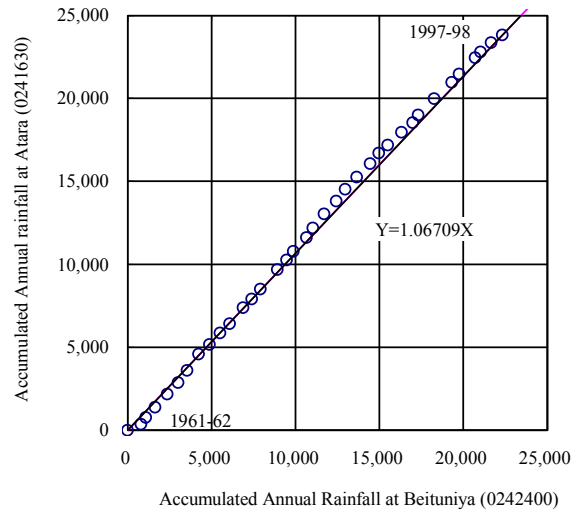
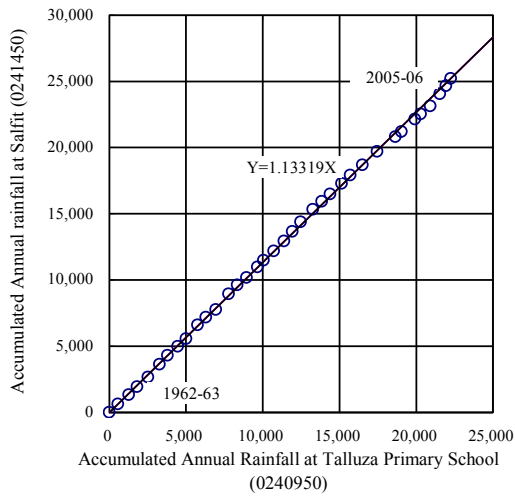
Station-B (mm)

r ; Coefficient

With the double mass curves, the complete rainfall data in and around the both basins are derived for the period from 1953/1954 to 2005/06 to generate the daily rainfall data for the interrupted periods. The above coefficients are derived in Figure 2.4 and the table below:

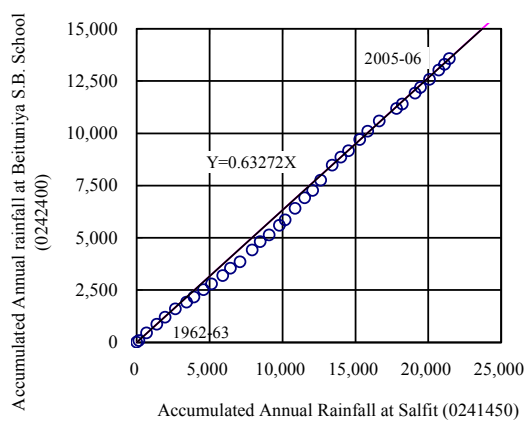
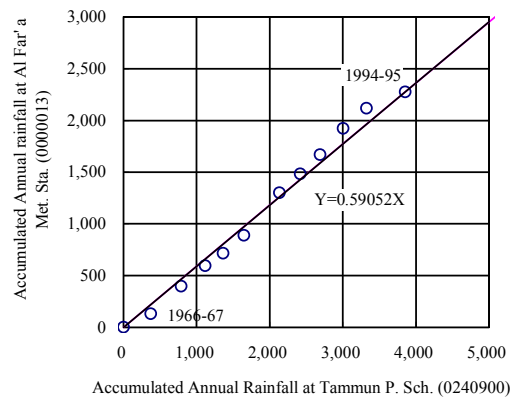
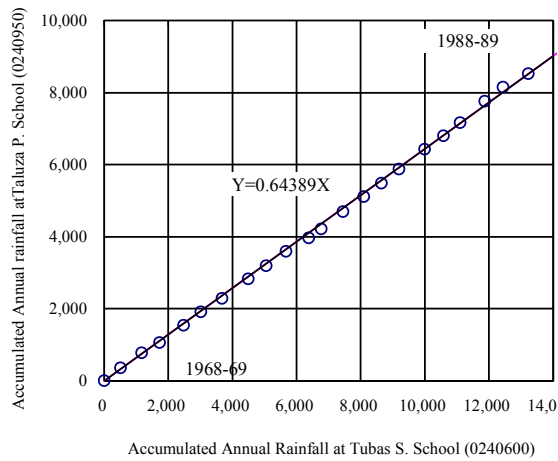
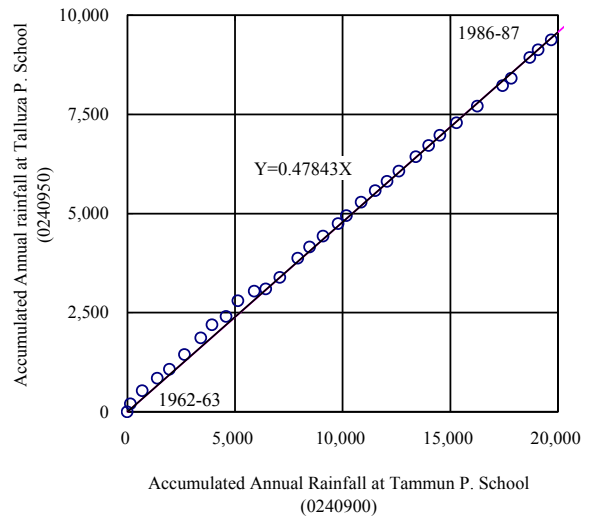
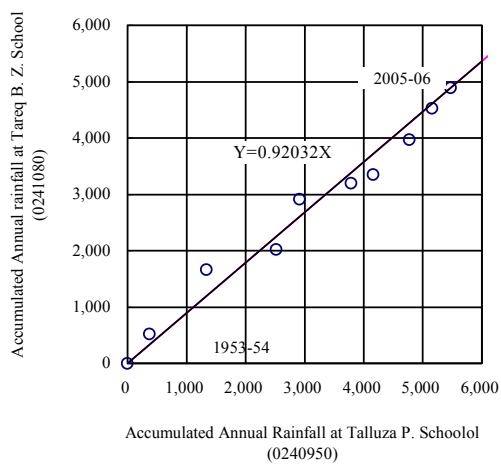
Coefficients of Accumulated Annual Rainfalls at Different Two (2) Stations

No.	Rainfall Station-A	Rainfall Station-B	Coefficient (r)
1.	Salfit (0241450)	Talluza P. Sch.(0240950)	1.13319
2.	Qaryut P. Sch.(0241470)	Salfit (0241450)	0.77983
3.	Beituniya S. B. Sch (0242400)	Salfit (0241450)	0.92013
4.	Atara (0241630)	Beituniya S. B. Sch (0242400)	1.06709
5.	Jericho Met. Sta. (0000015)	Al Far' a Met. Sta. (0000013)	0.74270
6.	Tareq B. Z. Sch. (0241080)	Talluza P. Sch.('0240950)	0.92032
7.	Talluza P. Sch.('0240950)	Tubas S. Sch. (0240600)	0.64389
8.	Beituniya S. B. Sch (0242400)	Salfit (0241450)	0.63272
9.	Talluza P. Sch.(0240950)	Tammun P. Sch.(0240900)	0.47843
10.	Al Far' a Met. Sta. (0000013)	Tammun P. Sch.(0240900)	0.59052



Source: computed by JICA Study Team

Figure 2.4 Double Mass curve between Annual Rainfalls (1/2)



Source: computed by JICA Study Team

Figure 2.4 Double Mass curves between Annual Rainfalls (2/2)

3 Hydrology

3.1 Availability of Hydrological Data

In general, the hydrological condition of the study area is very complex, being dominantly affected by the groundwater movement not only in the catchment area, but also in the neighboring basins outside or inside the catchment that is called "the Groundwater Area (GW Area)". In the wadi Far'a basin, the GW Area exists in the catchment. In the basin, rainfall which infiltrates into underground in the GW Area moves to the northern part of Israel. Thus, the groundwater in the GW Area disappears from the catchment of the Wadi Far'a basin. On the contrary, groundwater in the southern wadi basins including Wadi Qilt is augmented by groundwater coming from catchment (GW Area) located outside the wadi basin to the east.

Meanwhile, a TOR on this study specifies to formulate the storm water harvesting plan in the Wadi Qilt and Wadi Far'a basins. Basically, the present hydrological analysis is carried out to be utilized for the formulation of storm water harvesting plan on these two (2) major wadis in the study area.

There are some kinds of structural methods for stormwater harvesting that are practiced in the Jordan River East Bank area in Jordan. These include construction of storage type dam on wadi and diversion of wadi flood runoff and store it in storage facilities. In connection with the hydrological analysis, it has to be noted that, in case of development of storage type dam, the monthly runoff data allows the storage type dam development plan to be formulated to a satisfactory extent. In case of diversion scheme for wadi flood runoff, on the other hand, it is essential to apply the hourly runoff data, namely flood hydrograph for each flood event, to estimate the divertible discharges with accuracy. In general, it is difficult to simulate the accurate flood hydrograph of wadi from the hourly rainfall data, even in case the hourly rainfalls are available with a comparatively high density in the catchment. This has been so often experienced in the existing flood forecasting system in the East Asian countries where a flood forecasting and warning systems (FFWSs) are installed in some basins to cope with the severe flooding.

In the course of data collection conducted in the First Field Work stage, it is found out that the hourly discharges are observed at stream gauges on the Al-Far'a and Al-Badan, the uppermost tributaries of the Wadi Far'a, under the EU-Najah University cooperative study. The JICA Study Team could get the hourly runoff data for only the two (2) hydrological years of 2003/2004 and 2004/2005, which are shown in the interim report on the said on-going project. At the end of the Second Field Work stage, the additional runoff data for two (2) years of 2004/05 and 2005/06 are obtained through the concerned staff of PWA. As discussed hereunder, the annual mean discharges for the Al-Far'a and Al-Badan are estimated based on the runoff data for the four (4) years.

With regard to the flood runoff data on the Wadi Qilt, any continuous hydrological data could not be obtained so far, since the meteo-hydrological equipment at the stream gauge on Wadi Qilt, which was installed in 2003, were entirely stolen before starting the observation. On the other hand, a meeting with the in-charge personnel of Joint Water

Commission (JWC) was held on July 9th, 2007 in Tel Aviv in order to request to provide the JICA Study Team with the runoff data observed on the Wadi Qilt. The flood runoff data on Wadi Qilt obtained from Israel and their availability are discussed in the proceeding Section 3.2.3.

Taking into account the very limited availability of flood runoff data on Wadi Qilt, as well as the fact that the hydrological analysis is being carried out by the EU Engineer and Najah University, the present hydrological analysis is carried out to estimate the flood runoff of Wadi Qilt by means of applying the daily rainfall data to the simulation model called the “Tank Model”.

3.2 Preliminary Runoff Analysis on Wadi Qilt

3.2.1 Current Metering Conducted by PWA on the Wadi Qilt

PWA conducted the discharge measurements on Wadi Qilt and Wadi Far’a in the event of occurrence of flood thereon. Table 3.1 shows the discharge measurement results which are attached to the previous study report on storm water harvesting in the Eastern Surface Catchment of the Jordan River West Bank, which was prepared by FORWARD in September 1998.

Table 3.1 also summarizes the discharge measurement results by PWA. On the other hand, these flood runoff data on Wadi Qilt are not so useful because of instantaneous and sporadic data, although it can be assured that the flood runoff of the Wadi Qilt occurs almost concurrently with that of the Wadi Far’a as shown in Table 3.7.

As shown in Tables 3.1, the large flood discharges of more than were so often measured on the Wadi Qilt by current metering conducted by PWA for the period from 1971 to 1994. The measured maximum discharge exceeds 30 m³/sec.

As mentioned above, on the other hand, these were measured instantaneously measured when the hydrological monitoring team could visit the measurement site and no continuous flow data on the flood events are not available. Therefore, it is considered that the actual peak discharges would be by far larger the measured discharges. Besides, it seems that the PWA monitoring team would not be able to proceed always to the measurement site because of the difficulty in staffing for the field works and budget, whenever the flood occurred on the Wadi Qilt.

Unfortunately, the detailed data of current metering could not be found in the PWA’s office. Hence, it is hard to assess the accuracy of the current metering conducted by the PWA.

During the Field Work stages in this Study, the JICA Study Team continued to observe visually flood flow on the Wadi Qilt. In floods of the middle of May 2007 and the subsequent floods on the wadi Qilt, it is visually confirmed that the wadi water is quite muddy, showing the high turbidity due to the extremely high sediment concentration.

Table 3.1 Results of Current Metering Carried out by PWA on the Wadi Qilt

(1) Extracted from the 1998 FORMARD Report

No.	Date	Time of Measurement (m ³ /sec)	Flood Discharge (m ³ /sec)	Flow area (m ²)	Mean Velocity (m/sec)
1	Jan. 19, 1974	10:40	3.08	2.15	1.44
2	- do -	12:30	3.99	3.02	1.32
3	- do -	13:40	4.02	2.81	1.43
4	Jan. 21, 1974	10:00	16.02	6.16	2.60
5	- do -	11:20	21.28	7.07	3.01
6	- do -	12:55	30.28	10.64	2.85
7	- do -	13:40	33.77	11.21	3.01
8	Jan. 22, 1974	9:15	9.79	4.32	2.27
9	Mar. 03, 1974	11:05	3.81	2.85	1.34
10	Mar. 04, 1980	12:00	2.78	2.74	1.01
11	Jan. 16, 1992	14:10	1.93	2.67	0.72
12	Feb. 18, 1992	14:45	2.51	2.74	0.92

Data Source: The 1998 FORWARD's Report

(2) Results of Current Metering Carried out by PWA on the Wadi Qilt

No.	Date	Flood Discharge Measured (m ³ /sec)
1	Apr. 18, 1971	0.89
2	Jan. 18, 1973	0.71
3	Mar. 03, 1980	2.36
4	Feb. 15, 1987	11.30
5	Feb. 03, 1988	18.11
6	Feb. 01, 1988	3.90
7	Dec. 02, 1991	6.48
8	Dec. 15, 1991	2.88
9	Jan. 07, 1992	7.60
10	- do - (after 4 hours)	8.81
11	Jan. 16, 1992	1.93
12	Jan. 25, 1992	1.93
13	Feb. 18, 1992	2.51
14	Feb. 06, 1992	18.48
15	Mar. 02, 1992	10.18
16	Dec. 20, 1992	17.45
17	Jan. 11, 1993	28.77
18	Jan. 11, 1993	15.21
19	Dec. 17, 1992	17.45
20	Nov. 24, 1994	1.40
21	- do - (after 3.5 hours)	5.29
22	Dec. 30, 1994	4.67

Data Source: PWA

During the flood, moreover, it was visually observed that the turbidity of the flood flow was especially high for the initial period of the flood. From these visual observations, it is estimated that a large amount of sediments are transported downstream at the time of occurrence of flood on the Wadi Qilt. Accordingly, the sedimentation condition will have to be taken into consideration in formulating the stormwater harvesting plan on the Wadi Qilt, although no suspended load data on the Wadi Qilt are available.

3.2.2 Flood Runoff Data on Wadi Qilt, Provided by Israel

Flood runoff data on the Wadi Qilt provided by Israel consists of the following ones on each of the flood events between 1967/68 and 1982/83 as shown in Table 3.2:

- Time/date of beginning and end of flood
- Duration of flood
- Peak discharge and time/date of its occurrence
- Flood runoff volume

Flood runoff observed by Israel is located at same location as the existing stream gauge location on the Wadi Qilt, upstream of Jericho. According to the data provided by Israel, a catchment area at the old stream gauge managed by Israel is 135 km².

In total, 52 flood events on the Wadi Qilt were observed by Israel and it is reported by the Israeli agency concerned that there are no flood runoff data with the exception of the ones shown in Table 3.2.

The runoff data on Wadi Qilt, provided by Israel, are very useful for the runoff analysis, but it deems that the runoff volume of one flood event estimated by Israeli data is very small at 0.001 to 0.436 million m³. The annual flood runoff volumes range 0.001 million m³ in 1970/71 to 0.738 million m³ in 1982/83. Besides, no runoff was observed in five (5) years of 1969/70, 1971/72, 1972/73, 1977/78 and 1978/79, as long as the data are concerned. It deems that the runoff volumes are much small, discouraging the development of storm water harvesting in the Wadi Qilt basin. In consideration of the point, the runoff volume for each flood event is newly estimated by the following calculation formula:

$$V_f = Q_p \cdot (T_1 + T_2) / 2 \times 3600 / 10^6$$

Where,

V_f : Flood runoff volume on the Wadi Qilt (million m³ (MCM))

Q_p : Peak discharge (m³/sec)

T_1 : Time from beginning of flood to occurrence of peak discharge (hour)

T_2 : Time from occurrence of peak discharge to end of flood (hour)

The flood runoff volume for each of flood events that is estimated by the above formula is shown in the rightist column in Table 3.2. Consequently, it is estimated that average annual flood runoff of about 1.41 million m³ (MCM) would take place for the period from 1967/68 to 1982/83.

Since the detailed data on the flood runoff data in the Wadi Qilt are insufficient, it is too hard to clarify the accuracy of the data mentioned above for preparation of storm water harvesting. Hence, it is essential to perform the flood runoff observation and measurement at the stream gauges that need to be newly installed on the Wadi Qilt in the future as described in the succeeding Chapter 4.

3.2.3 Concept of Tank Model

The Tank Model applied to the Wadi Qilt basin is illustrated in Figure 3.1. Normally, a tank model combining several tanks in a series makes a better simulation results.

In Japan, a number of river basins are successfully analyzed by the tank model consisting of four tanks in a series. In such models, each tank interacts in the manner described in the following equation (1):

$$\begin{aligned}
 X_n' &= X_n - Y_n - Z_n \\
 Z_{n+1} &= X_n' + X_{n+1} \dots\dots\dots (1)
 \end{aligned}$$

Where,

X_n, X_{n+1} : water depth of stage- n and $(n+1)$ tanks, respectively

Y_n : outflow from side holes of stage- n tank

Z_n, Z_{n+1} : Outflow from bottom hole of stage- n and $(n+1)$ tanks, respectively

The top tank receives the rainfall as inflow to the tank, while the tanks below get the supply from the bottom holes of the tank directly above. The last or the bottom tank only has a side hole. The aggregated outflow from all the side holes of the tanks constitutes the inflow into the river course.

To effectively trace such dry conditions in the non-humid basin, several modifications are made on the basic model. The model is firstly facilitated with a structure to simulate the moisture content in the top tank. The sub-model is composed of two moisture-bearing zones, which contain moisture up to the capacities of saturation. The moisture contents in the two zones are expressed as the height, XP and XS , which are called the primary and secondary soil moisture depth. Between the above two zones, transfer of water contents takes place, as expressed below:

$$T2 = TC (XP/PS - XS/SS) \dots\dots\dots (2)$$

Where,

$T2$: Transfer of moisture between primary and secondary zones (if positive, transfer occurs from primary to secondary, and vice versa)

PS : Primary soil moisture capacity

SS : Secondary soil moisture capacity

XP : Primary soil moisture depth

XS : Secondary soil moisture depth

TC : Constant

If the primary soil moisture is not saturated, i.e. $XP < PS$, water is supplied to the primary

moisture zone from the lower tanks as a result of the capillary action, amount of which is computed as below:

$$T1 = TB (1 - XP/PS) \dots\dots\dots (3)$$

Where,

T1 : Transfer of capillary action from lower tanks

TB: Constant

For the purpose of simulating the area distribution of soil moisture, the drainage area is divided into four sub-areas, as shown in Figure 3.2. In the beginning of the dry season, the area at the outermost fringe dries up, and the dried area extends inwards until the inner-most area becomes arid. Four basic models are combined in parallel, each of which corresponds to the sub-area described above, as shown in Figure 3.2.

3.2.4 Results of Hydrological Analysis on wadi Qilt Using Tank Model Method

The trial simulations were carried out for the various combinations of the tank parameters to derive the adequate flood runoff for Wadi Qilt basin using long-term daily rainfall data at Beituniya (Code No.02424000) whose data are comparatively available over a long term. From the isohyetal map shown in Figure.2.1, the average rainfall of the Wadi Qilt above the old stream gauge is derived to be 322mm, which is equivalent to about 55% of the average annual rainfall at Beituniya. The simulation is performed utilizing the basin average rainfall derived from the long-term basin average daily rainfall data which are derived by multiplying those at Beituniya by the ratio, as well as average evaporation values of those at Jericho and Nablus.

The tank parameters selected through the trial simulations are shown in Table 3.3. As a result, the runoff data are derived on the daily data basis and the mean annual runoff volume of the Wadi Qilt between 1953/54 and 2005/2006 is derived at 1.67 (MCM). Their monthly values for the period are summarized in Table 3.4. The estimated monthly maximum daily runoff volumes and number of days of runoff occurrence for the same period are shown in Tables 3.5 and 3.6.

As a result, the runoff data are derived on the daily data basis and the mean annual runoff volume of the Wadi Qilt between 1953/54 and 2005/2006 is derived at 1.67 (MCM).

The Tank Model analysis carried out in this Study stage is regarded as preliminary, taking into account the availability of runoff data on the Wadi Qilt and rainfall data in the drainage are of the Wadi Qilt. Accordingly, it is recommended to review the analysis in the future stage when those data become sufficiently available.

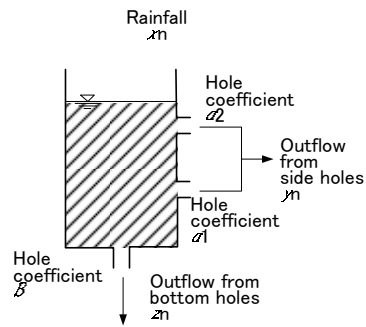
Table 3.3 Tank Parameters for Wadi Qilt Basin

Hole No.	Heights from Bottom (mm)	Hole Coefficient
<u>Top Tank</u>		
Side -1	10	0.21
-2	25	0.50
-3	35	0.80
Bottom	-	0.11
<u>Second Tank</u>		
Side	10.0	0.03
Bottom	-	0.05
<u>Third Tank</u>		
Side	7.5	0.02
Bottom	-	0.03
<u>Fourth Tank</u>		
Side	5.0	0.01
Bottom	-	0.02

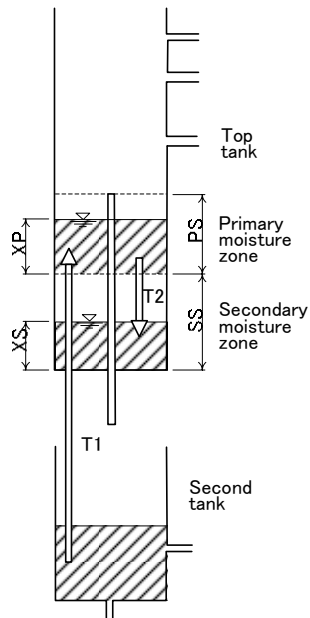
Item	Value	Remarks
TB	0.5	Refer to Eq. (2) in Section 3.2.3
TC	4.0	Refer to Eq. (2) in Section 3.2.3
PS	10mm	Refer to Figure 3.1
SS	30mm	Refer to Figure 3.1

Source: JICA Study Team

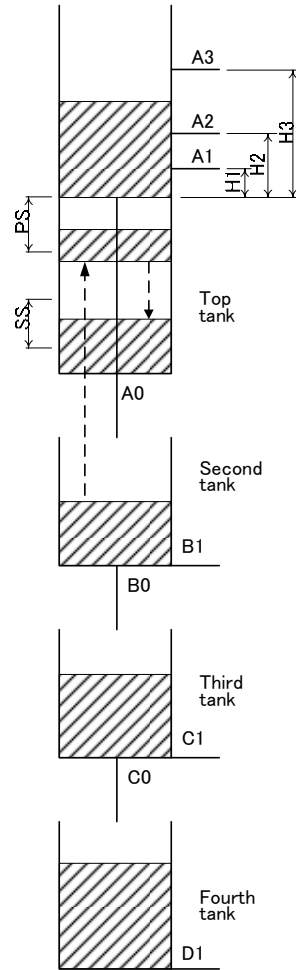
(i) Simple tank model



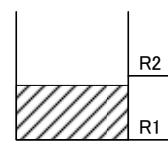
Soil moisture model



(ii) Basic tank model



River channel



PS: Primary soil moisture capacity

SS: Secondary soil moisture capacity

XP: Primary soil moisture depth

XS: Secondary soil moisture depth

T1: Transfer by capillary action from lower tanks

$$T1 = TB \times \left(1 - \frac{XP}{PS}\right)$$

TB: Constant

T2: Transfer of moisture between primary and secondary zones

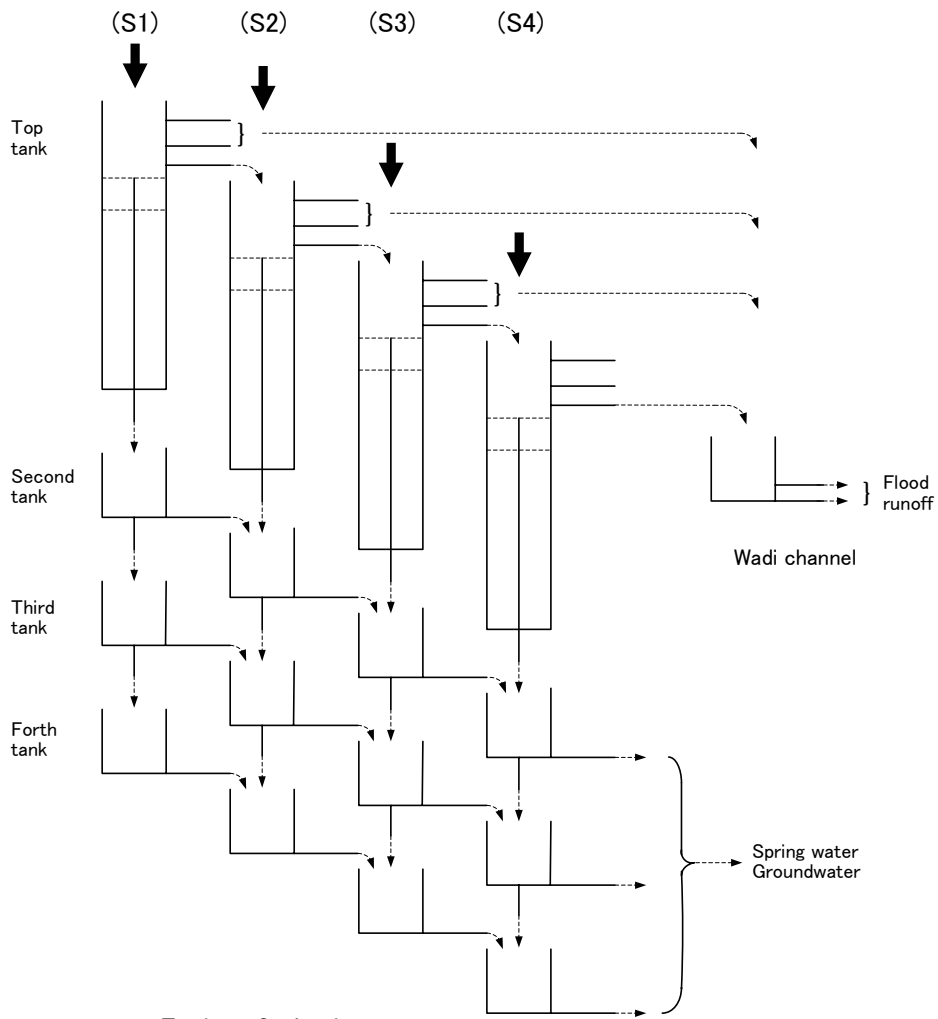
$$T2 = TC \times \left(\frac{XP}{PS} - \frac{XS}{SS}\right)$$

TC: Constant

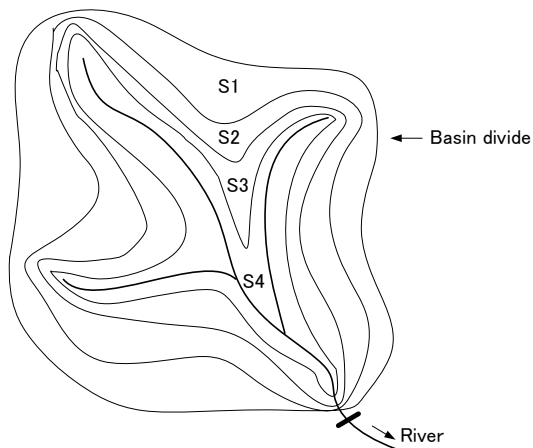
Source: JICA Study Team

Figure 3.1 Schematic Diagram of Tank Parameters

Structure of composite tank model



Zoning of a basin



Source: JICA Study Team

Figure 3.2 Composite Tank Model Applied to the Wadi Qilt Basin

Table 3.4 Monthly Total Runoff Volume on Wadi Qilt, Estimated by Tank Model

(Unit: MCM)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Yearly
1953-54	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
1954-55	0.00	0.00	0.00	0.12	0.43	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.88
1955-56	0.00	0.00	0.01	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1956-57	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03
1957-58	0.00	0.00	0.00	1.30	0.54	2.66	0.12	0.00	0.00	0.00	0.00	0.00	4.62
1958-59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1959-60	0.00	0.00	0.00	0.00	0.15	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.17
1960-61	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.03
1961-62	0.00	0.00	0.00	1.80	1.04	0.57	0.00	0.00	0.00	0.00	0.00	0.00	3.42
1962-63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1963-64	0.00	0.00	0.00	1.85	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.86
1964-65	0.00	0.00	0.23	0.66	0.09	0.59	0.00	0.00	0.00	0.00	0.00	0.00	1.57
1965-66	0.00	0.00	0.00	0.00	0.45	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.61
1966-67	0.00	0.00	0.00	1.32	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.33
1967-68	0.00	0.00	0.03	0.00	1.97	0.10	0.03	0.00	0.00	0.00	0.00	0.00	2.13
1968-69	0.00	0.00	0.00	0.25	0.33	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.70
1969-70	0.00	0.00	0.00	0.00	0.19	0.03	2.56	0.00	0.00	0.00	0.00	0.00	2.78
1970-71	0.00	0.00	0.00	0.03	0.55	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.58
1971-72	0.00	0.00	0.01	0.62	0.02	0.01	0.00	0.64	0.00	0.00	0.00	0.00	1.30
1972-73	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.17
1973-74	0.00	0.00	0.00	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
1974-75	0.00	0.00	0.01	0.16	6.92	0.39	0.56	0.00	0.00	0.00	0.00	0.00	8.04
1975-76	0.00	0.00	0.00	0.00	0.00	0.53	0.11	0.00	0.00	0.00	0.00	0.00	0.63
1976-77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1977-78	0.00	0.00	0.00	0.84	0.12	0.01	0.10	0.00	0.00	0.00	0.00	0.00	1.07
1978-79	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
1979-80	0.00	0.00	1.98	0.21	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.81
1980-81	0.00	0.00	0.00	1.71	0.05	0.09	0.96	0.00	0.00	0.00	0.00	0.00	2.81
1981-82	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02
1982-83	0.00	0.00	0.00	0.00	0.07	1.38	0.00	0.00	0.00	0.00	0.00	0.00	1.46
1983-84	0.00	0.00	0.00	0.00	0.56	3.14	0.85	0.00	0.00	0.00	0.00	0.00	4.55
1984-85	0.00	0.00	0.00	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.06
1985-86	0.00	0.00	0.00	0.00	0.00	0.72	0.02	0.00	0.00	0.00	0.00	0.00	0.74
1986-87	0.00	0.00	2.55	0.01	0.10	0.15	0.00	0.00	0.00	0.00	0.00	0.00	2.81
1987-88	0.00	0.00	0.00	0.75	0.36	0.00	0.14	0.02	0.00	0.00	0.00	0.00	1.27
1988-89	0.00	0.00	0.00	0.53	0.21	2.01	0.06	0.00	0.00	0.00	0.00	0.00	2.81
1989-90	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
1990-91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-92	0.00	0.00	0.01	6.33	0.16	0.68	0.00	0.00	0.00	0.00	0.00	0.00	7.18
1992-93	0.00	0.00	0.03	2.45	1.54	4.89	0.10	0.00	0.00	0.00	0.00	0.00	9.01
1993-94	0.00	0.00	0.00	0.00	0.87	0.13	0.00	0.00	0.00	0.00	0.00	0.00	1.00
1994-95	0.00	0.00	0.38	2.23	0.06	0.21	0.39	0.00	0.00	0.00	0.00	0.00	3.27
1995-96	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
1996-97	0.00	0.00	0.00	0.01	0.61	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.93
1997-98	0.00	0.00	0.00	0.02	0.09	0.88	0.05	0.00	0.00	0.00	0.00	0.00	1.03
1998-99	0.00	0.00	0.00	0.00	0.01	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.11
1999-00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
2000-01	0.00	0.00	0.00	0.00	1.38	0.04	0.01	0.00	0.00	0.00	0.00	0.00	1.43
2001-02	0.00	0.00	0.00	0.74	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.79
2002-03	0.00	0.00	0.00	0.27	1.24	0.03	0.00	0.14	0.00	0.00	0.00	0.00	1.68
2003-04	0.00	0.00	0.00	0.00	0.01	5.97	0.89	0.01	0.00	0.00	0.00	0.00	6.88
2004-05	0.00	0.00	0.17	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
2005-06	0.00	0.00	0.00	0.00	0.08	1.44	0.00	0.00	0.00	0.00	0.00	0.00	1.51
Annual	0.00	0.00	0.10	0.48	0.42	0.52	0.14	0.02	0.00	0.00	0.00	0.00	1.67

Source: JICA Study Team

Table 3.5 Monthly Maximum Daily Runoff Volume on Wadi Qilt, Estimated by Tank Model

Unit: MCM/day)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Yearly
1953-54	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
1954-55	0.00	0.00	0.00	0.05	0.22	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1955-56	0.00	0.00	0.01	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1956-57	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
1957-58	0.00	0.00	0.00	0.66	0.18	1.20	0.07	0.00	0.00	0.00	0.00	0.00	1.20
1958-59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1959-60	0.00	0.00	0.00	0.00	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.07
1960-61	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
1961-62	0.00	0.00	0.00	0.78	0.25	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.78
1962-63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1963-64	0.00	0.00	0.00	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21
1964-65	0.00	0.00	0.13	0.28	0.02	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.28
1965-66	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1966-67	0.00	0.00	0.00	0.76	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.76
1967-68	0.00	0.00	0.01	0.00	0.63	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.63
1968-69	0.00	0.00	0.00	0.07	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1969-70	0.00	0.00	0.00	0.00	0.10	0.01	1.09	0.00	0.00	0.00	0.00	0.00	1.09
1970-71	0.00	0.00	0.00	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1971-72	0.00	0.00	0.01	0.20	0.01	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.22
1972-73	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.09
1973-74	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
1974-75	0.00	0.00	0.00	0.05	1.28	0.16	0.23	0.00	0.00	0.00	0.00	0.00	1.28
1975-76	0.00	0.00	0.00	0.00	0.00	0.17	0.04	0.00	0.00	0.00	0.00	0.00	0.17
1976-77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1977-78	0.00	0.00	0.00	0.23	0.02	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.23
1978-79	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
1979-80	0.00	0.00	1.07	0.06	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07
1980-81	0.00	0.00	0.00	0.50	0.01	0.03	0.67	0.00	0.00	0.00	0.00	0.00	0.67
1981-82	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
1982-83	0.00	0.00	0.00	0.00	0.07	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.49
1983-84	0.00	0.00	0.00	0.00	0.24	1.24	0.50	0.00	0.00	0.00	0.00	0.00	1.24
1984-85	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
1985-86	0.00	0.00	0.00	0.00	0.00	0.14	0.01	0.00	0.00	0.00	0.00	0.00	0.14
1986-87	0.00	0.00	1.15	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	1.15
1987-88	0.00	0.00	0.00	0.26	0.16	0.00	0.14	0.01	0.00	0.00	0.00	0.00	0.26
1988-89	0.00	0.00	0.00	0.19	0.06	0.70	0.02	0.00	0.00	0.00	0.00	0.00	0.70
1989-90	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
1990-91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-92	0.00	0.00	0.01	1.88	0.04	0.21	0.00	0.00	0.00	0.00	0.00	0.00	1.88
1992-93	0.00	0.00	0.01	1.06	0.96	1.67	0.05	0.00	0.00	0.00	0.00	0.00	1.67
1993-94	0.00	0.00	0.00	0.00	0.62	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.62
1994-95	0.00	0.00	0.14	0.70	0.01	0.08	0.20	0.00	0.00	0.00	0.00	0.00	0.70
1995-96	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
1996-97	0.00	0.00	0.00	0.00	0.30	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.30
1997-98	0.00	0.00	0.00	0.01	0.03	0.64	0.01	0.00	0.00	0.00	0.00	0.00	0.64
1998-99	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05
1999-00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
2000-01	0.00	0.00	0.00	0.00	0.64	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.64
2001-02	0.00	0.00	0.00	0.42	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
2002-03	0.00	0.00	0.00	0.15	0.74	0.01	0.00	0.13	0.00	0.00	0.00	0.00	0.74
2003-04	0.00	0.00	0.00	0.00	0.00	1.45	0.63	0.01	0.00	0.00	0.00	0.00	1.45
2004-05	0.00	0.00	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
2005-06	0.00	0.00	0.00	0.00	0.02	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.60
Annual	0.00	0.00	1.15	1.88	1.28	1.67	1.09	0.22	0.00	0.00	0.00	0.00	1.88

Source: JICA Study Team

Table 3.6 No. of Days of Runoff Occurrence on wadi Qilt in Each Month, Estimated by Tank Model

(Unit: No. of days of runoff occurrence)

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Yearly
1953-54	0	0	0	5	0	0	0	0	0	0	0	0	5
1954-55	0	0	0	3	5	8	0	0	0	0	0	0	16
1955-56	0	0	0	6	0	0	0	0	0	0	0	0	6
1956-57	0	0	0	0	2	0	0	0	0	0	0	0	2
1957-58	0	0	0	6	6	7	3	0	0	0	0	0	22
1958-59	0	0	0	0	0	0	0	0	0	0	0	0	0
1959-60	0	0	0	0	5	0	0	0	0	0	0	0	5
1960-61	0	0	0	0	0	0	4	0	0	0	0	0	4
1961-62	0	0	0	10	10	6	0	0	0	0	0	0	26
1962-63	0	0	0	0	0	0	0	0	0	0	0	0	0
1963-64	0	0	0	7	0	1	0	0	0	0	0	0	8
1964-65	0	0	5	7	4	8	0	0	0	0	0	0	24
1965-66	0	0	0	0	11	1	0	0	0	0	0	0	12
1966-67	0	0	0	7	0	1	2	0	0	0	0	0	10
1967-68	0	0	1	0	10	3	2	0	0	0	0	0	16
1968-69	0	0	0	7	4	2	0	0	0	0	0	0	13
1969-70	0	0	0	0	5	0	8	0	0	0	0	0	13
1970-71	0	0	0	1	7	0	3	0	0	0	0	0	11
1971-72	0	0	0	10	0	0	0	7	0	0	0	0	17
1972-73	0	0	0	0	0	5	0	0	0	0	0	0	5
1973-74	0	0	0	0	8	0	0	0	0	0	0	0	8
1974-75	0	0	0	3	19	7	5	0	0	0	0	0	34
1975-76	0	0	0	0	0	13	3	0	0	0	0	0	16
1976-77	0	0	0	0	0	0	0	0	0	0	0	0	0
1977-78	0	0	0	11	0	0	6	0	0	0	0	0	17
1978-79	0	0	0	4	0	0	0	0	0	0	0	0	4
1979-80	0	0	3	5	5	0	2	0	0	0	0	0	15
1980-81	0	0	0	7	0	3	5	0	0	0	0	0	15
1981-82	0	0	0	0	0	0	4	0	0	0	0	0	4
1982-83	0	0	0	0	1	9	0	0	0	0	0	0	10
1983-84	0	0	0	0	9	10	6	0	0	0	0	0	25
1984-85	0	0	0	0	3	2	1	0	0	0	0	0	6
1985-86	0	0	0	0	0	15	0	0	0	0	0	0	15
1986-87	0	0	7	0	2	4	0	0	0	0	0	0	13
1987-88	0	0	0	7	4	0	1	2	0	0	0	0	14
1988-89	0	0	0	0	0	6	0	0	0	0	0	0	6
1989-90	0	0	0	0	0	0	0	0	0	0	0	0	0
1990-91	0	0	0	0	0	0	0	0	0	0	0	0	0
1991-92	0	0	0	17	2	10	2	0	0	0	0	0	31
1992-93	0	0	2	9	8	16	3	0	0	0	0	0	38
1993-94	0	0	0	0	5	5	0	0	0	0	0	0	10
1994-95	0	0	6	14	3	4	8	0	0	0	0	0	35
1995-96	0	0	0	0	1	2	0	0	0	0	0	0	3
1996-97	0	0	0	1	6	0	8	0	0	0	0	0	15
1997-98	0	0	0	1	4	6	3	0	0	0	0	0	14
1998-99	0	0	0	0	1	0	6	0	0	0	0	0	7
1999-00	0	0	0	0	4	0	0	0	0	0	0	0	4
2000-01	0	0	0	0	12	1	1	0	0	0	0	0	14
2001-02	0	0	0	6	2	0	0	0	0	0	0	0	8
2002-03	0	0	0	6	6	1	0	2	0	0	0	0	15
2003-04	0	0	0	0	5	15	9	0	0	0	0	0	29
2004-05	0	0	4	2	0	0	0	0	0	0	0	0	6
2005-06	0	0	0	0	4	8	0	0	0	0	0	0	12
Annual	0.0	0.0	0.5	3.1	3.5	3.4	1.8	0.2	0.0	0.0	0.0	0.0	12.4

Source: JICA Study Team

3.3 Preliminary Runoff Analysis on Wadi Far'a

3.3.1 Runoff Characteristics of Wadi Far'a

In view of the yield of the surface water resources, the Wadi Far'a basin is blessed with the vegetation condition and gentle topography as compared with the Wadi Qilt basin.

Geologically, on the other hand, it appears that the Wadi Fara basin is composed of very high permeable subsurface layers and that a large-scale aquifer zone is formed underground in the basin. The two (2) sub-catchments, Al-Fara sub-catchment and Al-Badan sub-catchment, account for the main parts of catchment area of the Wadi Far'a basin contributing to surface runoff. It is reported by the PWA that the streamflow of the Wadi Far'a disappears once downstream of the confluence of the two (2) tributaries and appears again in the wadi channel at the downstream position. Besides, there exists in the Al-Fara sub-catchment a boundary of aquifer flows going toward north and east. Thus, runoff of the Wadi far'a basin is dominantly affected by movement of groundwater. Because of the geological and hydro-geological condition, the surface runoff from the Al-Fara sub-catchment is comparatively small.

3.3.2 Discharge Measurement on Wadi Far'a, Conducted by PWA

As well as the Wadi Qilt, PWA has conducted the current metering on the Wadi Fari'a. Table 3.7 shows the results of the discharge measurements on the Wadi Far'a:

Table 3.7 Results of Current Metering Carried out by PWA on the Wadi Qilt

(1) Extracted from the 1998 FORMARD Report

No.	Date	Time of Measurement (m ³ /sec)	Flood Discharge (m ³ /sec)	Flow area (m ²)	Mean Velocity (m/sec)
1	Jan. 21, 1974	10:30-11:30	28.05	12.00	2.34
2	- do -	13:00	22.05	10.78	2.05
3	- do -	13:00-14:00	21.40	10.89	1.97
4	Jan. 31, 1974	12:50	4.25	3.26	1.30
5	Feb. 20, 1983	12:40	9.13	5.56	1.64
6	Feb. 21, 1983	13:25	10.34	5.88	1.76

Data Souece: The 1998 FORWARD's Report

(2) Results of Current Metering Carried out by PWA on the Wadi Qilt

No.	Date	Flood Discharge Measured (m ³ /sec)
1	Feb. 20, 1983	7.99
2	Feb. 21, 1983	10.34
3	Dec. 02, 1991	7.65
4	Feb. 06, 1992	11.52
5	Mar. 02, 1992	7.22
6	Dec. 20, 1992	16.20
7	Jan. 11, 1993	22.50

8	- do - (after 1.5 hours)	15.21
9	Dec. 17, 1992	16.20
10	Nov. 24, 1994	17.20
11	Nov. 30, 1994	1.91
12	Dec. 03, 1994	6.12
13	Dec. 19, 1994	8.01
14	Dec. 20, 1994	2.67
15	Feb. 12, 2005	1.58
16	- do - (after 7 hours)	24.54
17	Feb. 06, 2005	22.09
18	Feb. 05, 2005	9.31

Data Source: PWA

As shown in the table above, the flood discharges measured by PWA on the Wadi Fari'a often exceed 10 m³/sc as shown in the table above. The maximum measured discharge on the Wadi Fari'a reaches about 28 m³/sec.

3.3.3 Hydrological Analysis Based on Runoff Data Observed at Existing Stream Gauges

The continuous discharge data at stream gauges on Al-Badan and Al-Far'a available for the winter seasons of 2003/2004 and 2004/2005 are obtained from the "Second Interim Report on Impacts of Global Changes on Water Resources in Wadis Contributing to the Lower Jordan Basin". The Al-Badan and Al-Far'a sub-catchments constitute the uppermost ones of the Wadi Far'a and both stream gauges are situated just upstream of their confluence. These stream gauges are measured to occupy a catchment area of 74.2 km² and 118.6 km², respectively, using 1 to 100,000 scale topographic maps procured from the Survey of Israel.

As long as the continuous discharge data presented in Interim Report show, only the following floods are observed at the two stream gauges for the two (2) years:

No. of Flood	Date	Time	Peak Discharge (m ³ /sec)	
			S.G. on Al-Badan	S.G. on Al-Far'a
1.	Feb. 14, 2004	PM 4:30	4.84	(No record)
2.	Jan. 22, 2005	PM 8:00	7.67	0.19
3.	Feb. 05, 2005	PM 8:05	5.50	0.67
	Feb. 06, 2005	(Not clear)	(No record)	1.65

As seen in the table above, the flood runoff from the Al-Far'a catchment is very small, although its catchment area is comparatively large. It appears that most of rainfall in the sub-catchment infiltrates underground. While, in the Al-Badan sub-catchment, the noticeable runoff seems to take place after the sub-catchment is saturated to a certain level.

As described in the foregoing Section 3.1, the JICA Study Team gathered the runoff data in 2004/2005 and 2005/2006 in the Second Field work stage.

Figures 3.3 and 3.4 illustrate the relationship between runoff depth in each sub-catchment and rainfall depth at Tubas for the February 2007 flood. As seen in these figures, the runoff depth in the Wadi Far'a basin also seems to be low as compared with the rainfall.

The mean monthly discharge records at Al-Badan and Al-Far'a stream gauges between 2003/2004 and 2006/2007 are tabulated below:

Mean Monthly Discharges of Observed flow at Al-Badan Stream Gauge

Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.
2003-2004	-	-	0.11	0.15	0.18	0.36	0.21	-	-	-	-	-
2004-2005	-	-	-	0.15	0.18	0.36	0.21	-	-	-	-	-
2005-2206	-	-	0.25	0.55	0.75	0.74	0.54	-	-	-	-	-
2006-2007	-	-	-	0.29	0.38	0.56	0.55	-	-	-	-	-
Mean			0.18	0.28	0.37	0.50	0.38					

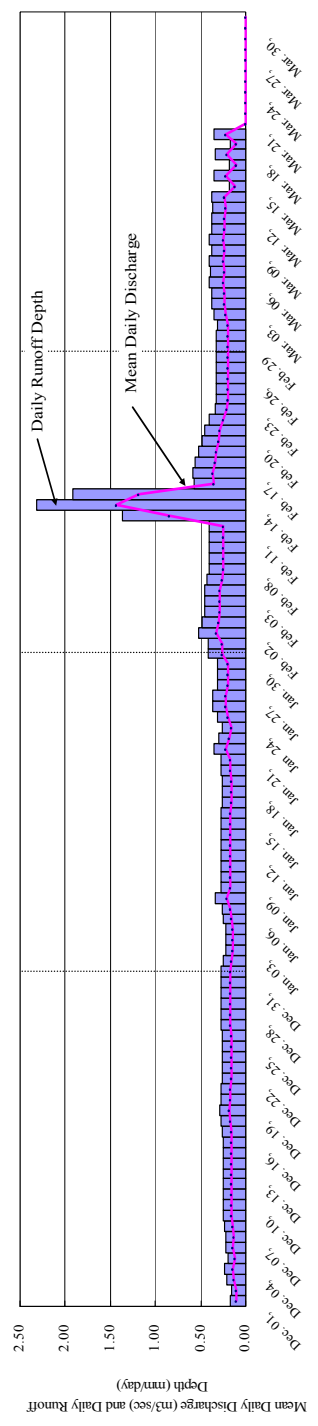
Note: "-" means that no data are available.

Mean Monthly Discharge of Observed flow at Al-Far'a Stream Gauge

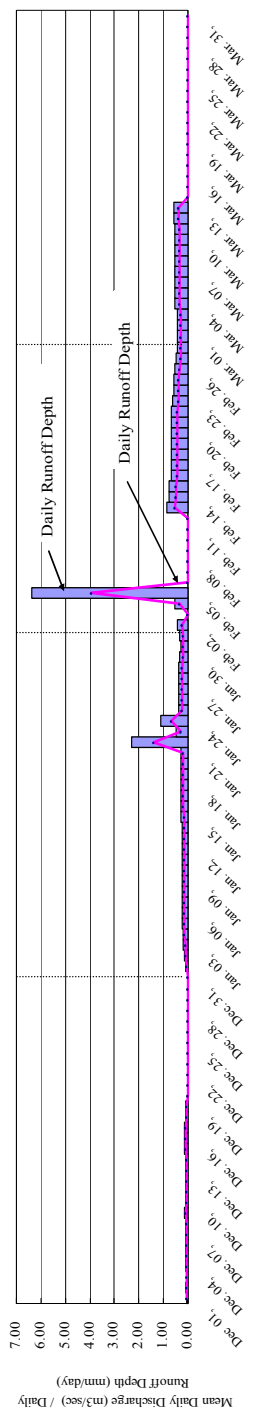
Year	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.
2003-2004	-	-	0.09	0.12	0.15	0.20	0.10	0.04	0.03	-	-	-
2004-2005	-	-	-	0.04	0.08	0.23	0.16	-	-	-	-	-
2005-2206	-	0.04	0.04	0.09	0.16	0.18	0.14	-	-	-	-	-
2006-2007	-	-	-	0.04	0.08	0.09	0.11	-	-	-	-	-
Mean	-	0.04	0.07	0.07	0.11	0.17	0.13	0.04	0.03	-	-	-

Note: "-" means that no data are available.

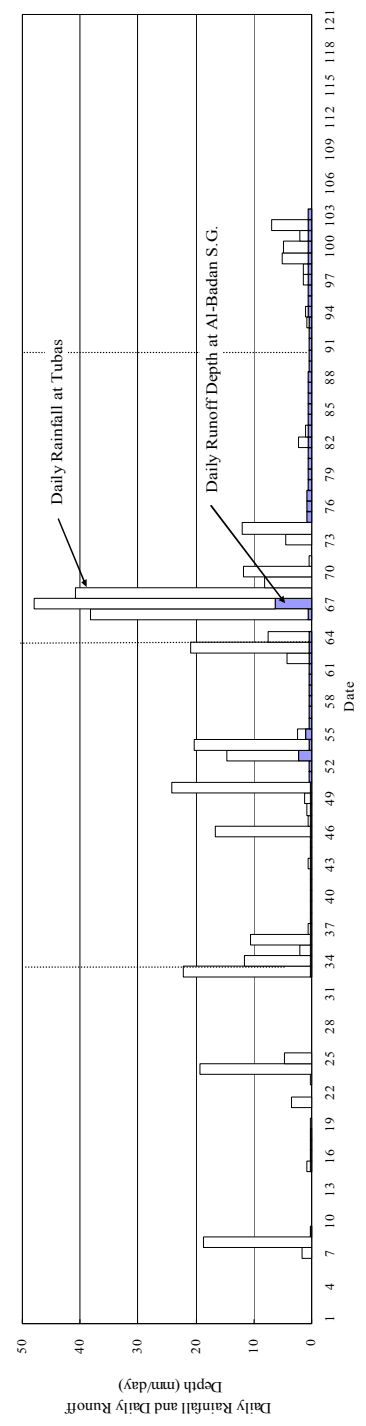
From the above runoff records, annual runoff volumes of the Al-Badan and Al-Far'a sub-catchments are derived at about 6.30 and 1.76 MCM, respectively. Hence, the total annual runoff volume at the confluence of the two tributaries is estimated to be about 8.1 (MCM).



Daily Rainfall and Daily Runoff Depth of Al-Badan Sub-catchment in 2003/2004



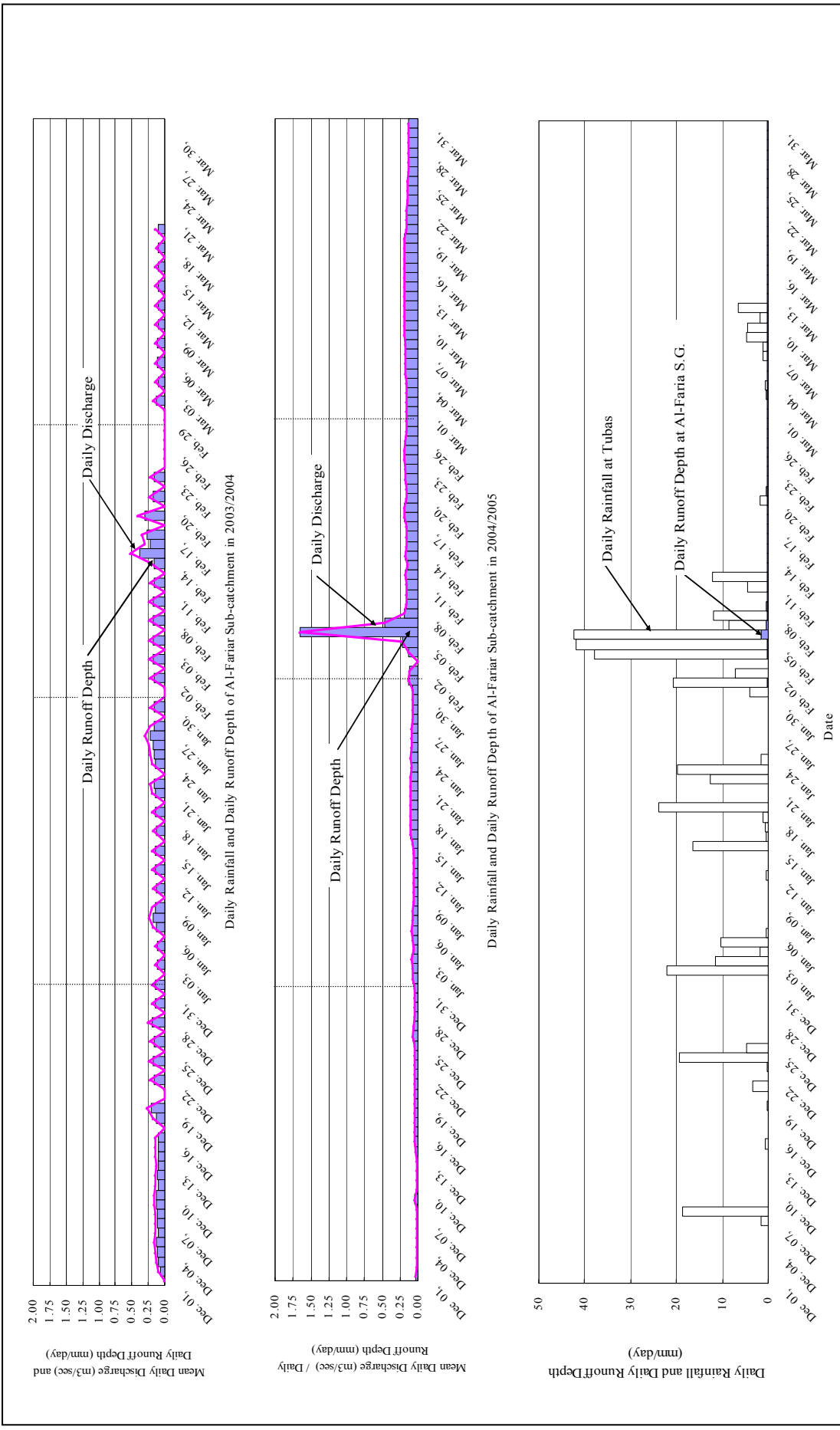
Daily Rainfall and Daily Runoff Depth of Al-Badan Sub-catchment in 2004/2005



Comparison of Daily Rainfall and Daily Runoff Depth of Al-Badan Sub-catchment in 2004/2005

Figure 3.3 Relationship between Runoff Depth at Stream Gauge at Al-Badan Stream Gauge and Rainfall at Tubas

Source: PWA



Comparison of Daily Rainfall and Daily Runoff Depth of Al-Far' ariar Sub-catchment in 2004/2005

Figure 3.4 Relationship between Runoff Depth at Stream Gauge at Al-Far' a Stream Gauge and Rainfall at Tubas

Source: PWA

4 Contents of Technical Specifications on Installation of New Streamflow Gauging Stations in the Study Area

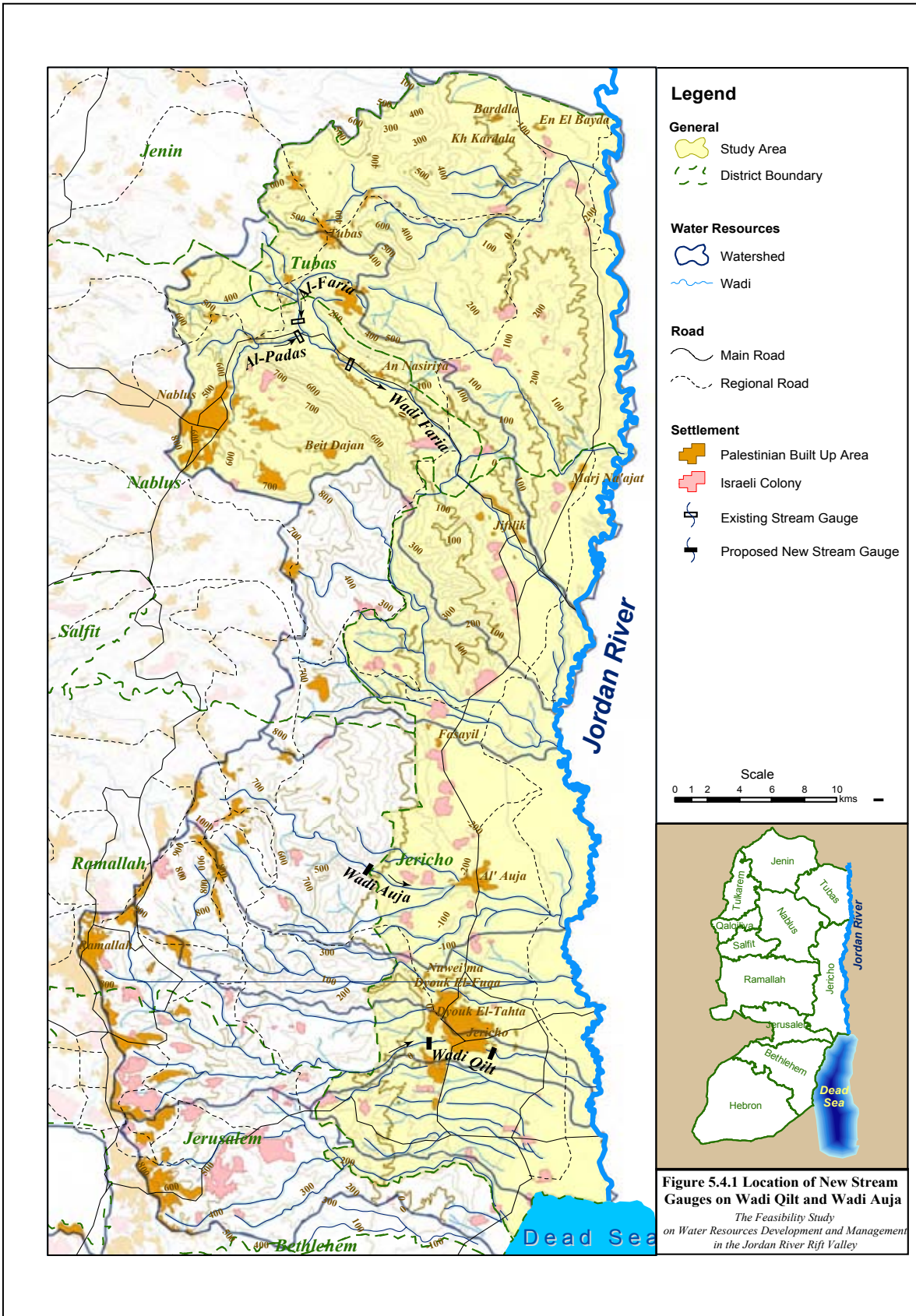
This Chapter III presents the technical specifications for installation of the new three (3) streamflow gauging stations, which was planned to be executed on a local contract basis during this Study. The locations thereof are; i) Upstream site of wadi Qilt, ii) Downstream site of Wadi Qilt, and iii) Wadi Auja. However, due to the procedural issues, the JICA Study Team could not start the contractual works during this Study and consequently the new streamflow gauging stations could not be installed within this Study stage. To realize the water harvesting plans suggested in this Study, however, it is essential to accumulate the hydrological data from now on. For the purpose, it is strongly hoped to install the 3 new streamflow gauging stations in the future in accordance with or with reference to the technical specifications presented hereunder.

4.1 General Description of the Works

The Works comprise installation of a new streamflow gauging station (SGS) equipped with automatic water level recorder (AWLR) and staff gauges at each of three (3) sites, which consist of two (2) sites on the Wadi Qilt, the upstream and downstream sites, and one (1) site on the Wadi Auja. The Works to be carried out by the Contractor shall also include execution of all the necessary survey, design and civil construction works, procurement and furnishing of materials, equipment, engineers and labors, and any other works that are required to complete the Works. At each of the three (3) streamflow gauging stations, sensor (or pressure) type AWLR and staff gauges shall be installed to keep on the long-term recording of water levels on the Wadi Qilt and Wadi Auja. The locations of two (2) and one (1) streamflow gauging stations on the Wadi Qilt and Wadi Auja, respectively, are shown in the table below and Figure 4.1:

Proposed New Streamflow Gauging Station (SGS) on Wadi Qilt and Wadi Auja

No.	Name of Wadi	Location of SGS	Installation Works
1.	Wadi Qilt	Upstream Site (Existing partial flume site)	<ul style="list-style-type: none"> ● A perforated polyvinyl chloride (PVC) pipe accommodating a sensor and its cable is planned to be buried inside the concrete wall of existing partial flume after removing and chipping the concrete as required and the pipe surface will be covered with mortal. ● The downstream eroded riverbed portion will be filled with gabions and boulders/bricks.
2.	Wadi Qilt	Downstream Site (Slightly downstream of existing garbage dumping site)	<ul style="list-style-type: none"> ● The left bank side will be excavated at a constant slope of 1:1 to install a perforated PVC pipe accommodating a sensor and its cable on base concrete placed on the excavated slope. The pipe will be encased with concrete and back-filled with excavated earth materials.
3.	Wadi Auja	Existing non-gated concrete weir	<ul style="list-style-type: none"> ● A perforated PVC pipe accommodating a sensor and its cable is planned to be installed at the left bank side of existing non-gated weir on the Wadi Auja.



Source: JICA Study Team

Figure 4.1 Locations of 3 New Streamflow Gauging Stations

4.2 Scope of the Works

4.2.1 Main Items of the Works

For each of the three (3) new streamflow gauging stations (SGSs), the Contractor shall carry out the following works:

- (i) Topographic survey including river cross section survey along the perforated PVC pipeline at each of 3 new SGS sites, and preparation of topographic map for the new streamflow gauging station site if required to do so for preparing the construction drawings mentioned in Item (ii) below,
- (ii) Preparation of construction drawings based on the topographic survey products including river cross sections, which will be worked out as mentioned in Item (i) above,
- (iii) Procurement of equipment and materials including sensor (or pressure) type automatic water level recorder (AWLR) and staff gauges,
- (iv) Construction works for installing the AWLR and staff gauges, and other appurtenant facilities such as concrete-made measuring box and sensor box, keeping a good relationship with the local inhabitants at each of 3 new SGS sites,
- (v) Installation of bench mark at nearby location of the new streamflow gauging station, and subsequent leveling survey between staff gauge and bench mark, as well as installation of sign,
- (vi) Test operation of the AWLRs and providing on-the-job training to the hydrological monitoring team of PWA and MOA, and
- (vii) Preparation and submission of reports.

4.2.2 Assignment of Experts

To carry out the Works, the Contractor shall mobilize and assign the following Experts during the Contract Period:

Experts to be Mobilized to the Works

Expert	Main Works to be Engaged in	Assignment Period (M/M)
1) Hydrologist (Team Leader)	To act the Team Leader of the Contractor and to be engaged in and responsible for completion of all the Works.	1.5*
2) Civil Engineer	To be engaged in site reconnaissance and detailed design of 3 new SGSs, and supervision of construction works	1.0
3) Surveyor	To be engaged in the topographic survey works	1.0
4) Cad Operator	To be engaged in preparation of construction drawings with CAD	1.0

4.2.3 Topographic Survey

On issuance of the “Notice to Proceed” by the Study Team, the Study Team will instruct to the Contractor the exact locations of sensor type AWLR and staff gauges at the field concerning each of the three (3) new streamflow gauging stations. Immediately thereafter, the Contractor shall carry out the topographic survey works including river

cross section survey, and preparation of topographic map if necessary, based on which the Contractor shall prepare the construction drawings for each of the 3 SGSs as described in the following Section 4.3.

4.3 Preparation of Construction Drawings

4.3.1 Site Reconnaissance

Prior to the start of preparation of the construction drawings, the Contractor shall carry out the site reconnaissance to each of the 3 new SGS sites to clarify the site conditions from the geotechnical and hydraulic viewpoints. In the site reconnaissance, besides, the Contractor shall confirm the maximum water levels which so far occurred at each of the three SGSs sites by means of hearing to the local inhabitants and getting information/data from PWA.

4.3.2 Preparation of Construction Drawings

For each of the three (3) streamflow gauging stations, the Contractor shall prepare the construction drawings based on topographic products inclusive of the river cross sections to be worked out in accordance with Subsection 4.2.3 above and with reference to the basic design shown in Figures 4.2 to 4.6. The AWLR and staff gauges shall be designed to enable to observe the aforesaid maximum water level at each site. The Contractor shall finalize the construction drawings as directed by the Study Team.

The standard dimensions of measuring box and sensor box are as follows:

- Measuring box: inside dimension of 35 cm (length) x 25 (width) x 20cm (depth) and concrete thickness of 5cm, reinforced with reinforcement bar of D10 (or ϕ 10)
- Sensor box: inside dimension of 20 cm (length) x 20 (width) x 15cm (depth) and concrete thickness of 5cm, reinforced with reinforcement bar of D10 (or ϕ 10)

The specifications of the concrete placement shall conform to those applied to the structural concrete in Palestine.

The measuring box and sensor box shall be designed to have enough inside dimensions to accommodate data logger/extra cable and sensor, respectively. Besides, the necessary measures shall be taken to avoid occurrence of theft of any equipment at the new SGS sites.

4.4 Procurement and Furnishing to the site of Materials and Equipment

4.4.1 Equipment and Materials for Stream Gauges

Prior to the installation of AWLR and manual staff gauges, the Contractor shall procure three (3) sets of AWLRs, staff gages and other necessary materials.

The specifications of these materials and equipment shall conform to the following, unless otherwise approved by the Study Team:

List of Equipment and Materials for Stream Gauges

No.	Equipment/Material	Quantity	Specifications
1.	Sensor (or pressure) Type AWLR with data logger and cable	3 (sets)	WL-16 Water Level Logger including spareparts including batteries with a life of 3 years, or the equivalent with the specifications shown in Table 4 below.
2.	Manual Staff gauge (1 piece has 1 m height)	11 (pieces)	It can be scaled with two (2) different colors and read at 1cm intervals. In principle, it is made of plastic board with a dimension of 6cm width or more and 1 m height per 1 sheet, unless otherwise approved by the Study Team.
3.	Polyvinyl chloride pipe (PVC) pipe	3 (nos.)*	Inside diameter of 10cm, conforming to the corresponding British standard as to its materials.
4.	Lap-top computer	1 (set)	To be usable for retrieving the WL data from data logger

Note: *; The total length of PVC pipes at 3 SGS sites is estimated at 15m as tabulated in the table of the succeeding Subsection 4.3.2.

The three (3) sets of AWLRs, each with enough cable length and data logger, shall be WL-16 Water Level Logger or the equivalent one with the specifications shown in the table below. The Contractor shall procure these from and/or through the dealer in Palestine or Israel, or the dealer in USA.

Specifications of AWLR to be Procured (WL-16 Water Level Logger)

No.	Item	Specifications
1.	General	
	1) Type of AWLR	Sensor (Pressure) type with <u>cable</u> and data storage equipment (data logger)
	2) Range of measurement of water level	0 to 10m
	3) Range of operational temperatures	-10°C to 70°C
	4) Accuracy	±0.1%
	5) Time interval of measurement of water level	changeable to measurement intervals of 30 and 60 minutes
2.	Sensor	
	1) Material	Sufficiently durable against alkaline water (preferably titanium steel-made)
	2) Shape and dimensions	Circular cylinder which can be inserted into PVC pipe of 10cm inside diameter
3.	Data logger (data storage equipment)	
	1) Dimensions	Data logger has to have the dimensions which can be accommodated in the Measuring Box.
	2) Type and life of battery	Lithium battery with a life of 7 years at WL measurement intervals of 30 minutes
	3) Capacity of memory	128 MB or more
	4) Data retrieving	can be retrieved with lap-top computer to be procured under this Contract
4.	Cable	
	1) Specifications	As specified by the manufacturer
	2) Length	can be extended as required to connect the sensor and data logger at each of the 3 SGSs

4.4.2 Required Length of Cable to Connect Sensor and Data Logger

The required length of cable to connect sensor and data logger at each of the 3 SGS sites is preliminarily calculated from Figures 4.2 to 4.6 as shown in the table below. However, the Contractor shall estimate the required length of cable at each of the 3 SGS sites with accuracy and shall make the procurement based on the estimate approved by the Study Team:

Required Length of Cable at Each of 3 SGSs

No.	SGS Site	Length between Sensor and Data Logger (m)	Allowance (m)	Required Length of Cable (m)
1.	Upstream Site of Wadi Qilt	2.0	1.0	3.0
2.	Downstream Site of Wadi Qilt	7.5	1.0	8.5
3.	Site of Wadi Auja	7.0	1.0	8.0
(Total)				(19.5)

4.4.3 Required Length of PVC Pipes (ϕ 10mm) at each of 3 SGSs Sites and Their Perforation

The required length of PVC pipe to accommodate sensor and its cable at each of the 3 SGS sites is estimated in the table below, but the Contractor shall estimate the required length of cable at each of the 3 SGSs sites with accuracy and shall make the procurement based on the Contractor's estimate approved by the Study Team:

Required Length of PVC Pipe at Each of 3 SGSs

No.	SGS Site	Required Length of PVC Pipe (m)
1.	Upstream Site of Wadi Qilt	2
2.	Downstream Site of Wadi Qilt	7
3.	Site of Wadi Auja	7
(Total)		16.0

Prior to installation of the PVC pipes, Each PVC pipe shall be perforated to have holes of 3cm or larger diameter at appropriate intervals so that the sensor and its cable can be easily inserted and pulled out manually. In perforating the PVC pipes, care shall be taken not to cause cracks and other damages to the PVC pipes.

4.4.4 Required Length of Manual Staff Gauges

The required length of manual staff gauges are estimated as show in the table below:

Required Length of Manual Staff Gauges at Each of 3 SGSs

No.	SGS Site	Required Length of staff gauges (m)
1.	Upstream Site of Wadi Qilt	2.0 (1.6)
2.	Downstream Site of Wadi Qilt	6.0
3.	Site of Wadi Auja	3.0
(Total)		(11.0)

4.4.5 Lao-Top Computer

The lap-top computer to be procured by the Contractor shall be selected from among the following two (2) kinds which shall have the specifications shown in table below:

- i) HP 530 Notebook PC
- ii) Dell Vostro 1500

The lap preloaded by Microsoft Office 2007, with the following specifications:

Specifications of Lap-Top Computer

Item	Specification
Processor (Clock Speed)	1.46GHz or more
Operating System	Genuine Windows XP Professional
Display	15.4-inch wide-screen
Memory	512 MB or more
Hard Drive	80GB or more (5400PRM or more)
Microsoft Software Preloaded	Microsoft Office 2007 inclusive of Microsoft WORD and EXCEL
Accessory	Carrying case

4.4.6 Other Construction Material and Equipment

The Contractor shall furnish the adequate construction materials and equipment to the site which are required for execution of excavation, concrete placement, and backfilling with excavated materials or filling with gabions/boulders/bricks, and chipping/removal of existing concrete at the upstream site of the Wadi Qilt.

4.5 Construction Works

4.5.1 Public Coordination

Prior to the start of the construction works at each SGS site, the Contractor shall explain the objectives of installation of new SGS to the chief personnel of the nearby district and local inhabitants so as to avoid occurrence of destruction and/or theft of equipment during and after construction.

The construction works at each of the three (3) SGS sites are described hereunder.

4.5.2 Upstream Site of Wadi Qilt

At the upstream site of Wadi Qilt, the AWLR and staff gauges are to be installed in parallel on right side concrete wall of existing partial flume as shown in Figures 4.2 and 4.3. The staff gauges shall be fixed to surface of concrete wall with nails for concrete or other adequate materials. The staff gauges of 1 m height shall be accurately set in series on the concrete using an auto-level machine.

To install the AWLR, the Contractor shall chip and remove concrete in the right side concrete wall and bottom concrete slab of existing partial flume in accordance with the approved construction drawings or as directed by the Study Team. In removing the concrete, the reinforcement bar may also need to be removed. The Contractor shall furnish the adequate construction equipment such as concrete breaker in order to

appropriately remove the concrete.

Before installing the PVC pipe to accommodate sensor type AWLR and its cable, the Contractor shall perforate it with adequate machine as shown in the approved construction drawings or as directed by the Study Team. The perforated PVC pipe shall be set in the concrete removed portion and the space between PVC pipe and remaining concrete shall be filled with mortar except for holes on PVC pipe.

At the top of the PVC pipe, a measuring box with a concrete cover shall be built with concrete. The measuring box will be provided with air holes as shown in Figure 4.3.

In addition to the installation works for stream gauges, the Contractor shall place gabions and boulders/bricks in the eroded riverbed portion located just downstream of existing partial flume site as shown in the construction drawings or as directed by the Study Team.

4.5.3 Downstream Site of Wadi Qilt

At the downstream site of Wadi Qilt, the left bank will be excavated at a slope of 1:1 and the perforated pipe to accommodate a sensor type AWLR and its cable shall be placed on a excavated slope as shown in Figures 4.4 and 4.5. The perforated pipe shall be encased with concrete except for the portions of holes on the PVC pipe. After completion of the concrete placement, both sides of PVC pipe encased with concrete shall be backfilled with excavated earth materials.

As well as the case in the upstream site of Wadi Qilt mentioned in Section 4.6.2 above, a concrete-made measuring box will be placed at the top of the perforated PVC pipe to accommodate the equipment to store water level data (data storage equipment or data logger). Besides, the riverbed at toe of the slope shall be excavated to place a sensor box, which is used to accommodate a sensor of the AWLR.

The staff gauges (1m height per 1 piece) shall be fixed on the concrete encasement for PVC pipe in stages as shown in Figures 4.4 and 4.5.

4.5.4 Site of Wadi Auja

The sensor type AWLR shall be installed beside left-bank side concrete wall of existing concrete weir as shown in Figure 4.6. As specified in Subsection 4.3.1 above, the Contractor shall check the highest water level that have so far occurred. The AWLR and manual staff gauges shall be installed to make it possible to record the highest water level with accuracy.

On the left bank of Wadi Auja located just upstream of the exiting weir, excavation shall be performed to constitute a constant bank slope of 1:2. Beside, the riverbed portion will also be excavated to place a concrete-made sensor box. The perforated PVC pipe shall be set on the excavated slope and encased with concrete. In case there is water in the Wadi channel, the riverbed excavation may need to be carried out under water and only upper portion of PVC pipe water above water surface will be encased with concrete. In case the under-water condition is encountered in the construction work, the pre-cast concrete may be utilized as the sensor box.

Three (3) staff gauges (3m height in total) will be fixed on vertical surface of the left-bank side concrete wall of existing weir with nails for concrete.

4.6 Installation of Bench Mark and Sign

For each of the three (3) new streamflow gauging stations, the Contractor shall construct a bench mark at the nearby location of the staff gauge site. For the bench mark, the Contractor shall make and install concrete a permanent concrete stake (7.5cm (W) x 7.5cm (L) x 15cm (H)) with nail or bolt in a central part on top surface thereof.

After installation of the bench mark, the Contractor shall carry out leveling survey between the bench mark and staff gauges in order to relate the elevation of bench mark and zero-height of the staff gauge. Based on the leveling survey, the Contractor shall determine the independent elevation of bench mark and zero-height of the staff gauges at each of three (3) SGS sites.

The contractor shall install a sign showing that the streamflow gauging station is operated by PWA/MOA under the Palestine Government.

4.7 Test Operation of AWLR and On-the Job-Training to Hydrological Monitoring Teams of PWA and MOA

The Contractor shall carry out the test operation for the AWLR by installing the necessary equipment to fill water in the portion of sensor of AWLR in order to assure the accurate recording of water levels. The test operation shall be carried out through the attendance of the hydrological monitoring team members of the PWA and MOA.

The Contractor shall perform the on-the-job training to the hydrological monitoring teams of PWA and MOA over two (2) days including the date of test operation mentioned above. The contents of on-the-job training to be performed by the Contractor will include the following:

- Design of SGS and river be protection works
- Setting of AWLR to adjust a water level read on manual staff gauge
- Proper O&M of the three (3) new streamflow gauging stations including countermeasures to cope with sedimentation problems on AWLR
- Retrieving of water level data records from AWLR

The Contractor shall notify the PWA and MOA of performing the on-the-job training of the date not later than one week before the date.

4.8 Preparation and Submission of Reports

During the Contract period, the Contractor shall send the Progress Report by to the Study Team by e-mail every Thursday. The Report shall state the activities and work progress of the Contractor during the week and schedule of the next week.

Besides, the Contractor shall submit to the Study Team three (3) hard copies of the Final Report containing:

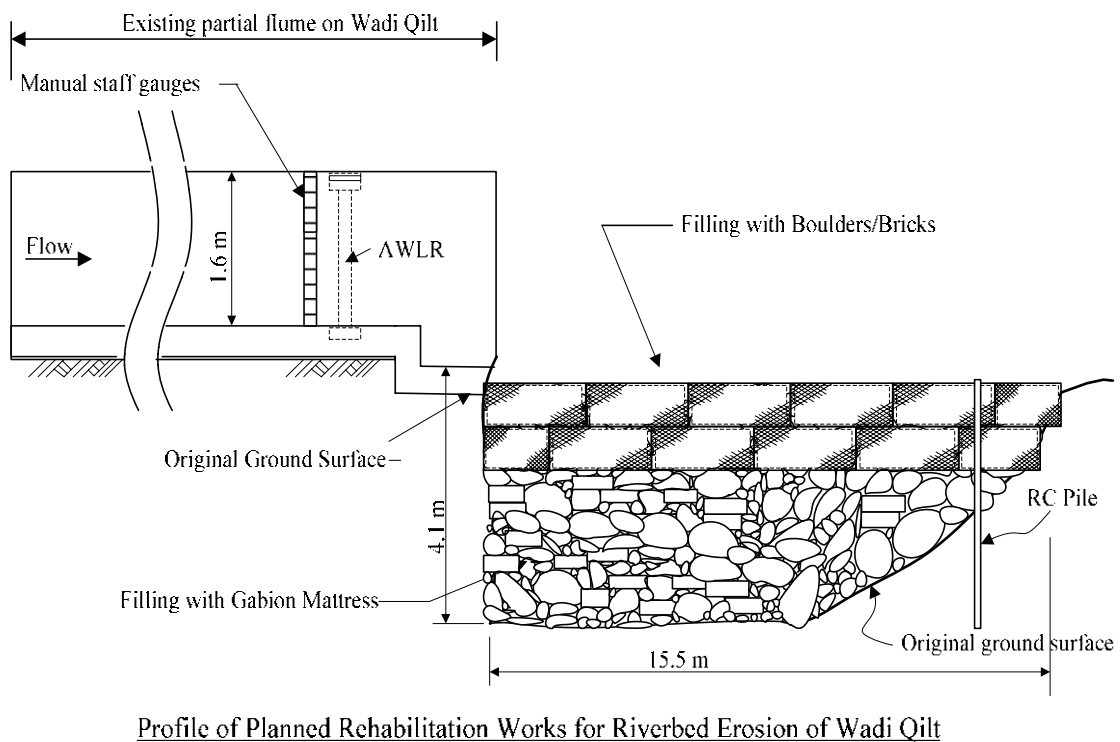
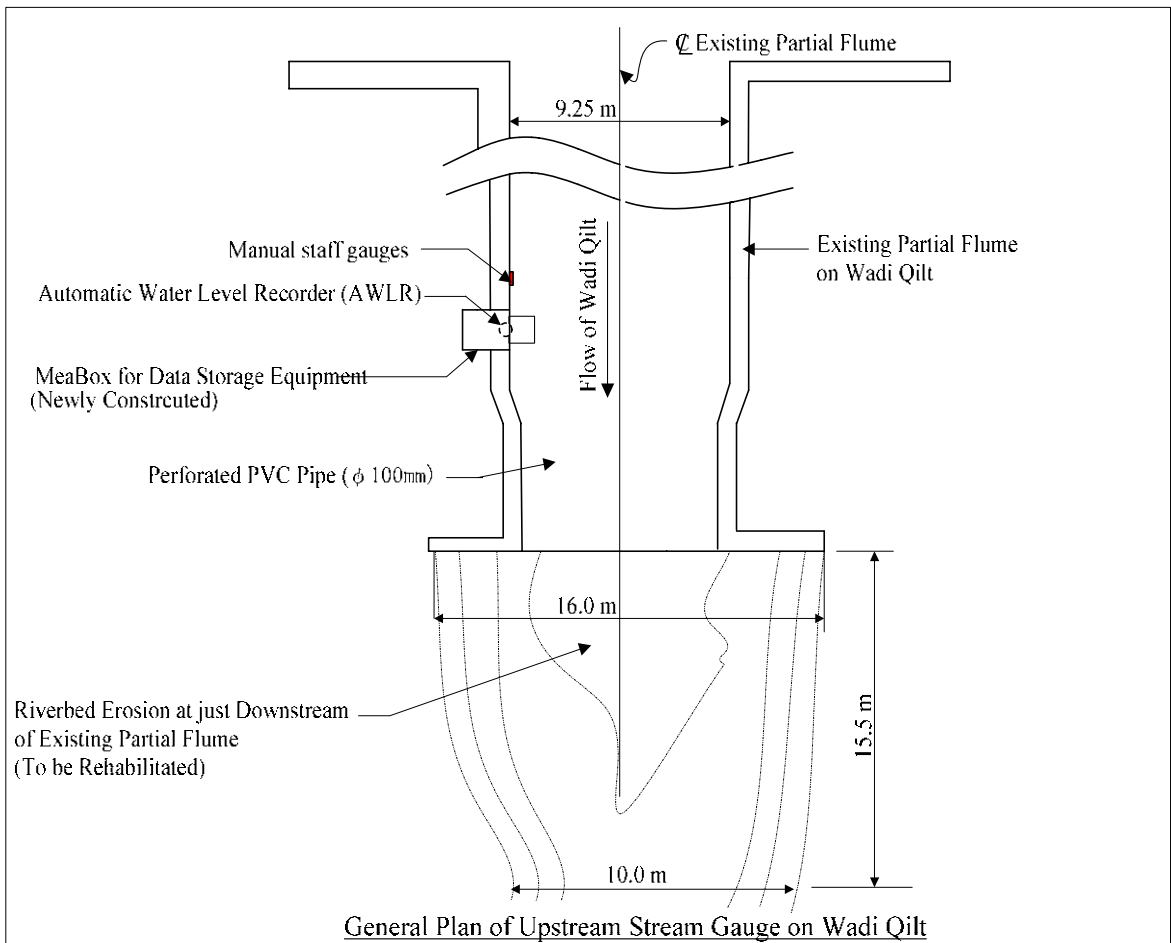
- Location maps of all the AWLR and staff gauges,
- Construction drawings prepared by the Contractor,

- Elevation of bench mark and zero-height of staff gauges,
- Results of test operation of AWLR,
- Actual work progress,
- Methods and procedures of the construction works according to the specifications given by the Study Team.
- Photos taken during construction.

4.9 Time Schedule

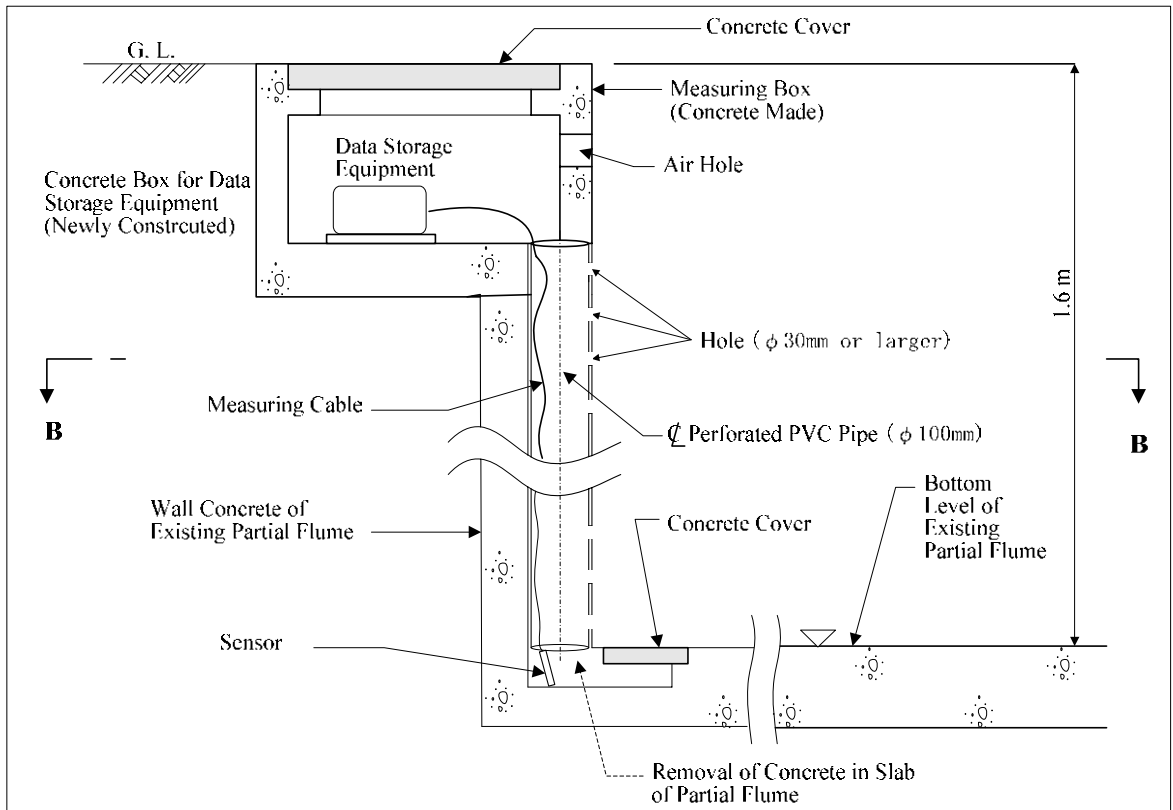
All the construction works shall be completed within 40 days after the Contract signing. The test operation of the 3 new SGSs shall be completed within 45 days after the Contract signing.

On receipt of the “Notice to Proceed” from the Study Team, the Contractor shall submit the detailed plan and schedule to the Study Team and the Works shall be commenced immediately after approval thereof by the Study Team.

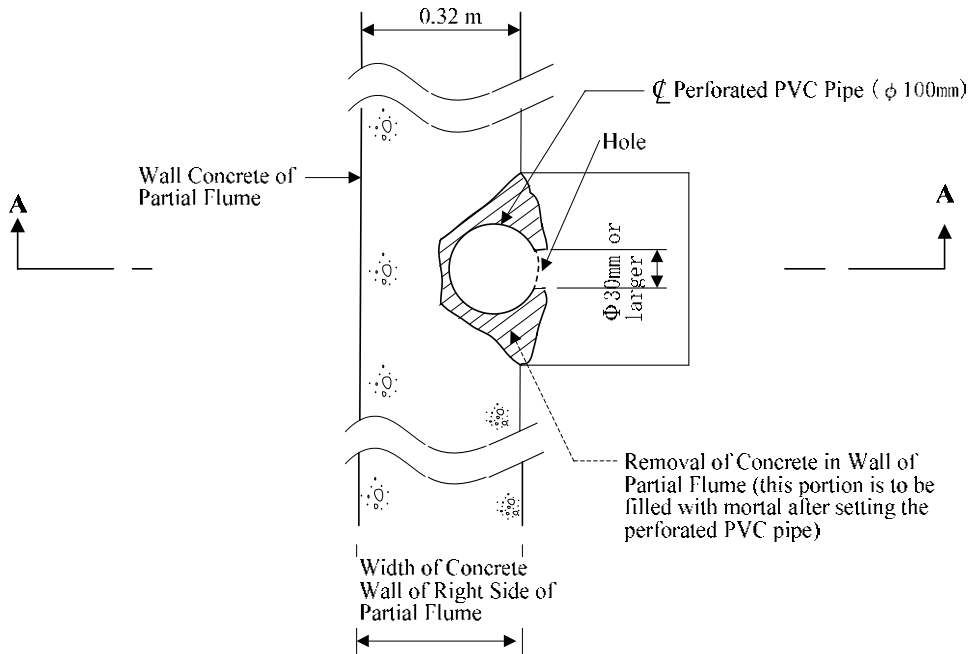


Source: the JICA Study

Figure 4.2 New Streamflow Gauging Station at Upstream Site of Wadi Qilt (1/2)



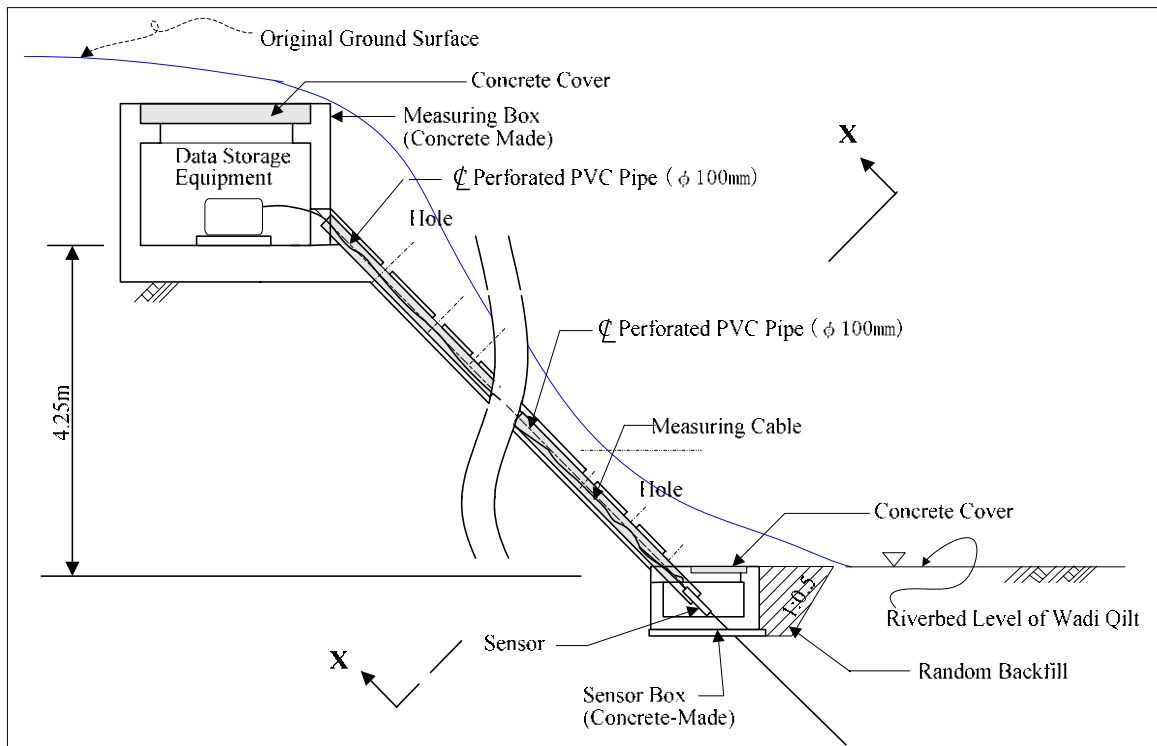
Profile of Upstream Wadi Qilt Stream Gauge (Section A-A)



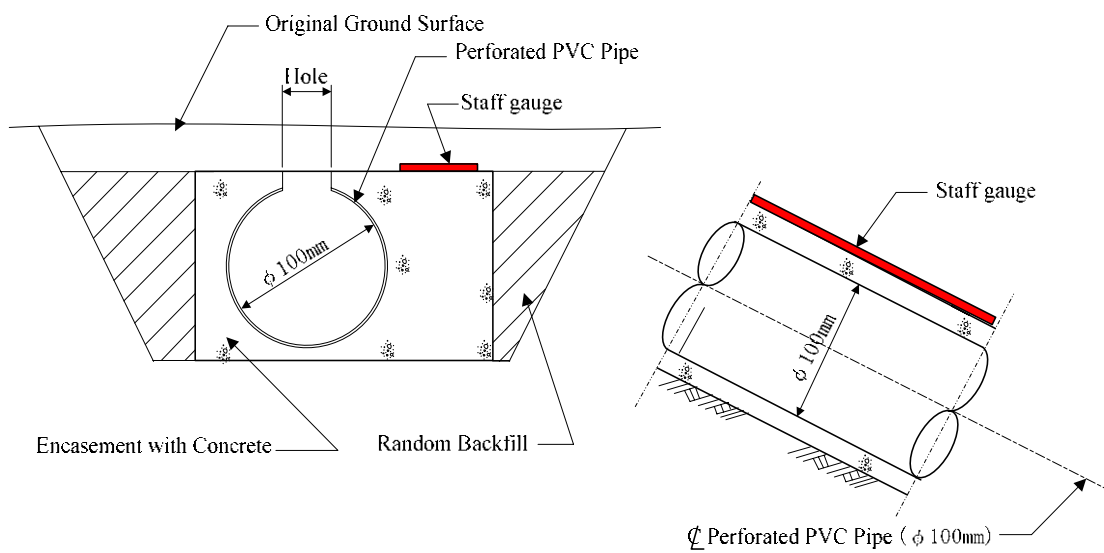
Detail of Concrete Removal in Partial Flume (Section B-B)

Source: the JICA Study

Figure 4.3 New Streamflow Gauging Station at Upstream Site of Wadi Qilt (2/2)



Typical Cross Section of Wadi Qilt at Downstream Stream Gauge Site
(Downstream of Garbage Dumping Site)

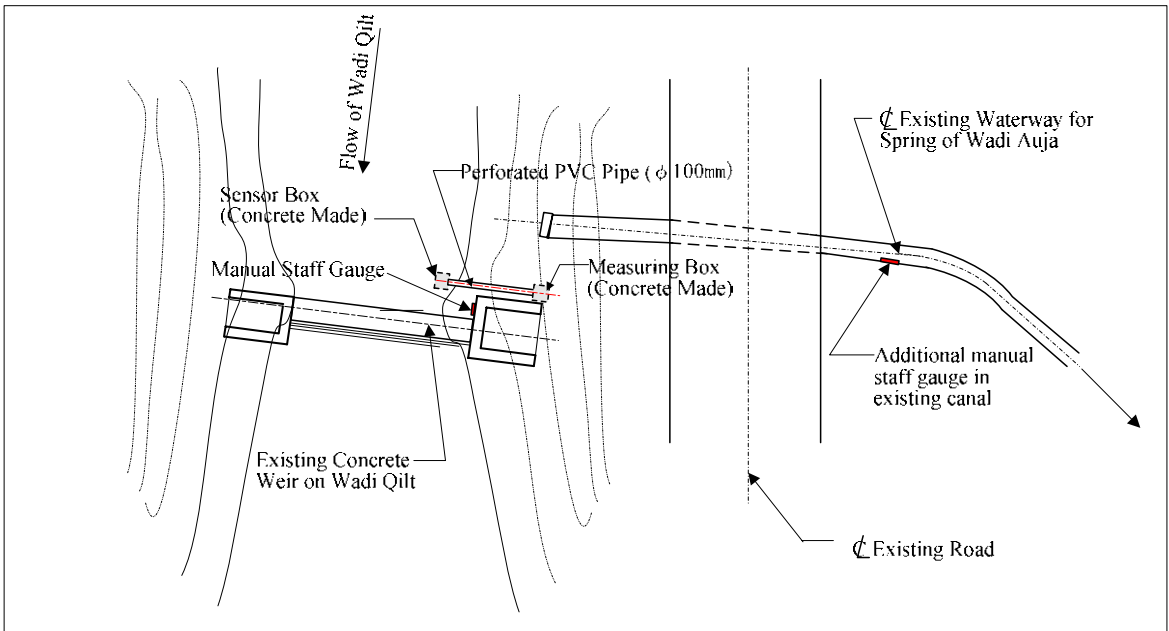


Typical Cross Section of PVC Pipe
Accommodating Measuring Cable
(Section X-X)

Profile of Staff Gauge

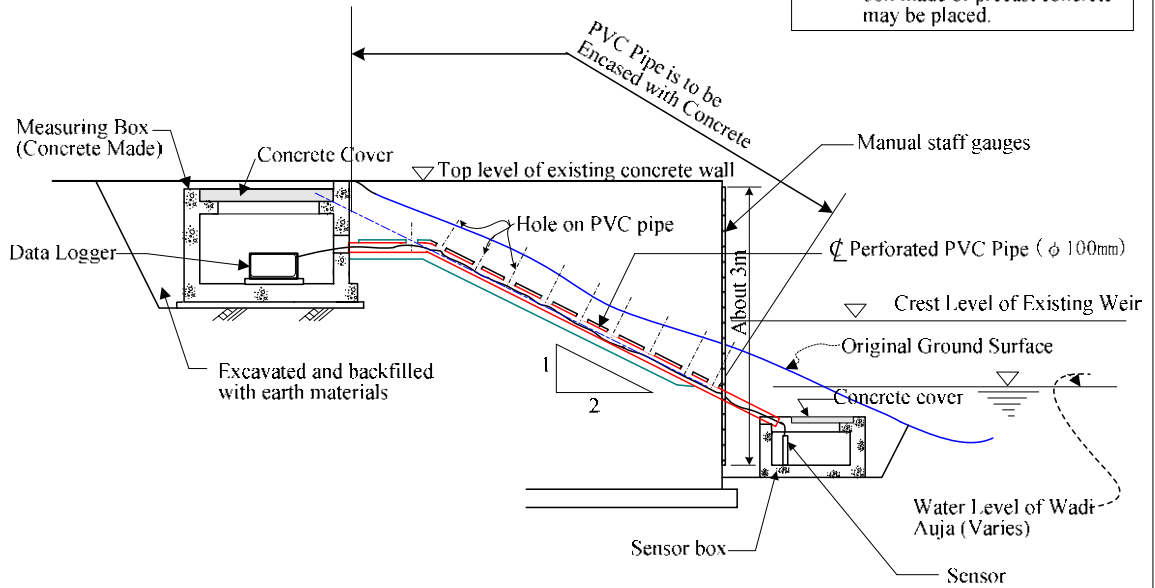
Source: the JICA Study

Figure 4.4 New Streamflow Gauging Station at Upstream Site of Wadi Qilt (2/2)



General Plan of Stream Gauge on Wadi Qilt

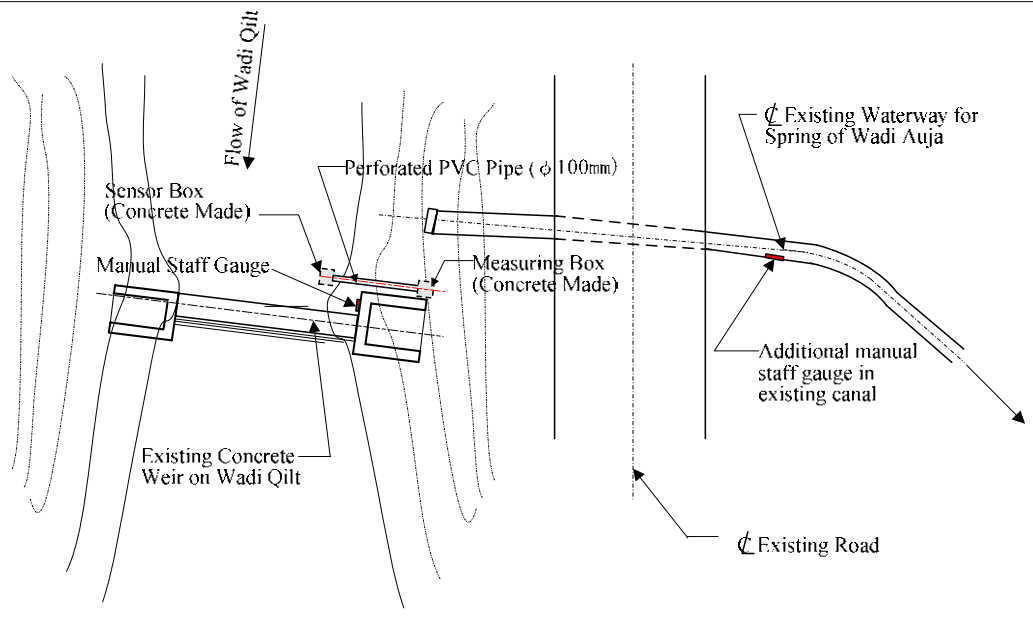
Note: In case there is water in the Wadi Auja channel, the sensor box made of precast concrete may be placed.



Profile of Planned Rehabilitation Works for Riverbed Erosion of Wadi Qilt

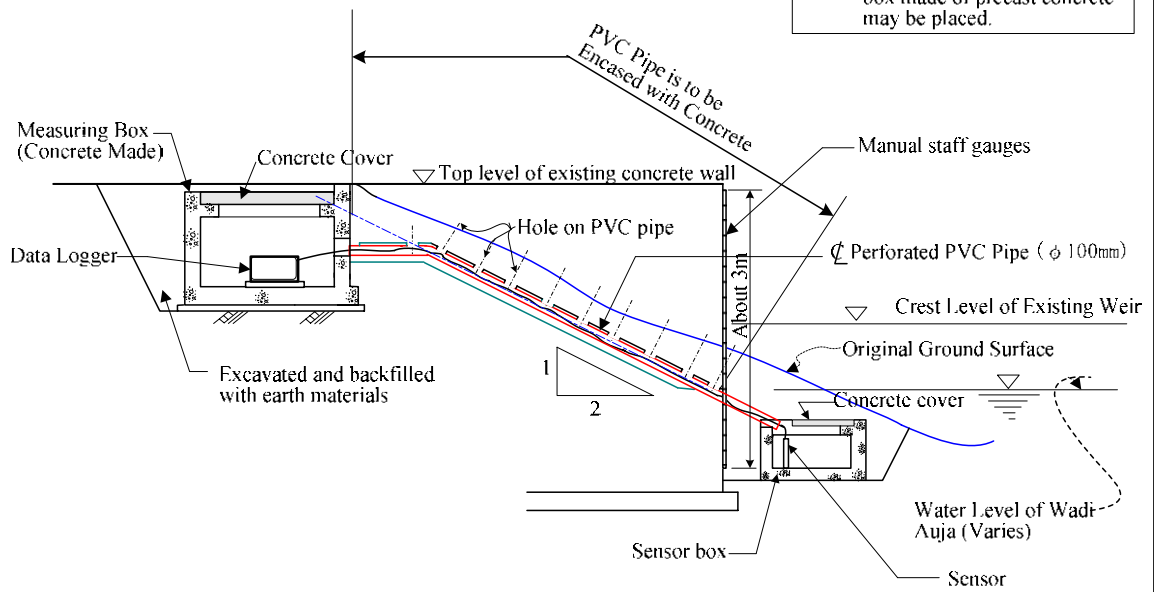
Source: the JICA Study

Figure 4.5 New Streamflow Gauging Station at Downstream Site of Wadi Qilt (2/2)



General Plan of Stream Gauge on Wadi Qilt

Note: In case there is water in the Wadi Auja channel, the sensor box made of precast concrete may be placed.



Profile of Planned Rehabilitation Works for Riverbed Erosion of Wadi Qilt

Source: the JICA Study

Figure 4.6 Figure 5 New Streamflow Gauging Station on Wadi Auja

Table 4.1 Bill of Quantities for Installation of Three (3) New Streamflow Gauging Stations (SGS)

No	Work Item	Unit	Quantity	Unit Price (US\$)	Amount (US\$)
I. Remuneration for Experts for 3 SGSs					
	1) Hydrologist (Team Leader)	Mon-month	1.5		
	2) Civil Engineer	Mon-month	1		
	3) Surveyor	Mon-month	1		
	4) Cad Operator	Mon-month	1		
	(Subtotal-1)				
II. Procurement of New Equipment and Materials for Installation of 3 New Streamflow Gauging Stations (SGSs)					
	1) Sensor type automatic water level (AWLR) with data logger and cable to connect AWLR and data logger	set	3		
	2) Staff gauge (1 m height per 1 piece)	Piece	15		
	3) PVC pipe	m	11		
	4) Laptop computer for retrieving the water level data from data logger	set	1		
	5) Other materials	L.S.	-----	-----	
	(Subtotal-2)				
III. Construction Works for Installing 3 New SGSs					
1. Upstream SGS Site of Wadi Qilt					
	1) Removal of concrete in wall and bottom slab of existing partial flume with concrete breaker and/or other construction machine	m ³	0.2		
	2) Instillation of PVC pipe including perforation thereon	m	1.7		
	3) Filling of mortar around PVC pipe	m ³	2.0		
	3) Filling of in the downstream eroded river bed portion				
	3-1) Boulders/bricks	m ³	43.0		
	3-2) Gabion	m ³	10.0		
	4) Placement of reinforced concrete in measuring box and concrete cover	m ³	0.3		
2. Downstream SGS site of Wadi Qilt					
	1) Excavation on left bank of Wadi Qilt	m ³	10.0		
	2) Base concrete (non-reinforced) for setting PVC pipe	m ³	0.4		
	3) Instillation of PVC pipe including perforation thereon	m	6.7		
	4) Placement of reinforced concrete in measuring box and sensor box	m ³	0.2		
3. SGS Site of Wadi Auja					
	1) Excavation on left bank of Wadi Auja	m ³	3.5		
	2) Base concrete (non-reinforced) for setting PVC pipe	m ³	0.1		
	3) Instillation of PVC pipe including perforation thereon	m	6.7		
	4) Placement of reinforced concrete in measuring box and sensor box	m ³	0.3		
	(Subtotal-3)				
IV. Installation of Bench Mark Including Leveling Survey and Installation of Sign (Placard) at 3 SGS Sites					
	(Subtotal-4)	L.S.	-----	-----	
V. Test Measurement and Preparation of Final Report					
	1) Test measurement of water levels at each of 3 New SGSs	L.S.	-----	-----	
	2) Preparation and submission of Final Report including photographs	L.S.	-----	-----	
	(Subtotal-5)				
VI. Rental of Cars for Carrying out the Works during the Contract Period					
	(Subtotal-6)	L.S.	-----	-----	
Total					

ANNEX 2

HYDROGEOLOGY



ANNEX 2 HYDROGEOLOGY

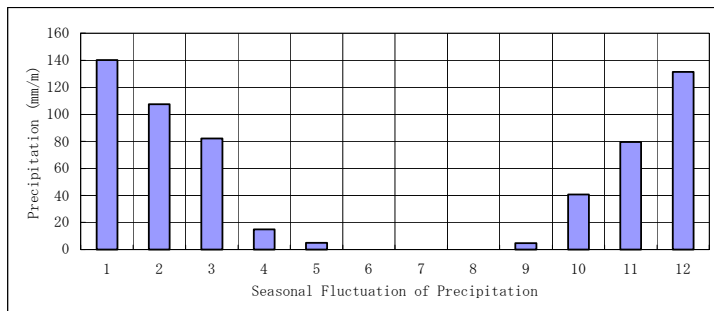
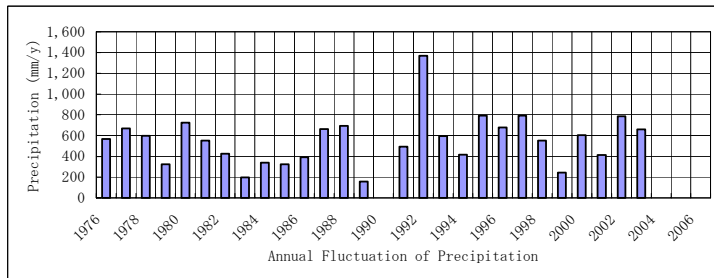
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Annex 2.1
Precipitation

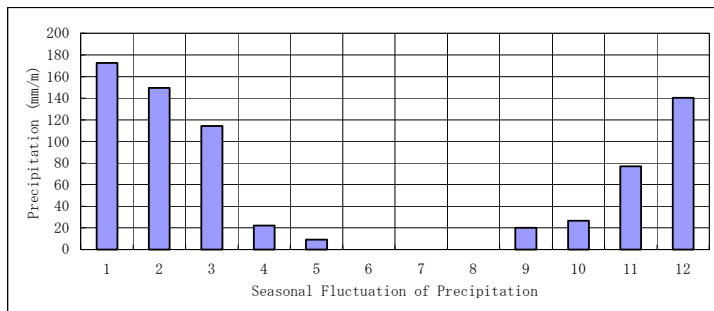
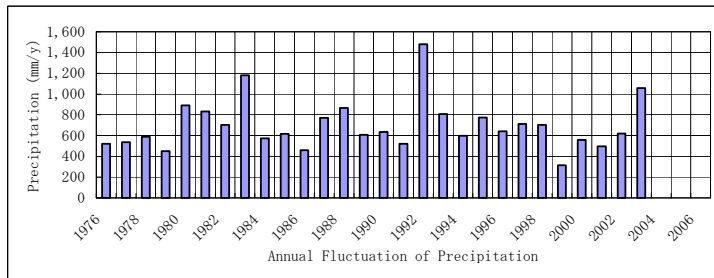
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 GR_Governate_E Qalqiia

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1976	75	116	105	10	2					16	86	158	568
1977	148	64	106	65	0					41	182	61	668
1978	93	62	72	3						133		235	598
1979	103	25	32	2	0					13	10	138	323
1980	70	137	94	7						39	101	276	725
1981	219	61	27	40						34	3	168	551
1982	37	112	114	2	4						147	10	425
1983											98	100	198
1984	104	53	77	30							52	24	339
1985	22	143	5	42						33	29	49	321
1986	88	128	19	14	28						35	79	392
1987	83	23	64						0	59	239	195	663
1988	118	181	62	12						79	4	240	695
1989										16	80	63	158
1990													
1991	185	142	108	22	3					3	15	17	493
1992	273	337	36	3	5					9	203	503	1,368
1993	119	94	42	0	3						65	272	595
1994	188	77	102	0	1					13	20	14	416
1995	96	127	8	24						40	293	204	790
1996	285	23	194	9							75	91	676
1997	62	274	237	9	3					74	29	107	793
1998	148	44	172	3						11	68	106	550
1999	128	48	11	2					9	4	3	37	242
2000	442	79	30							0	14	40	606
2001	82	41	6	17						143		125	413
2002	253	36	153							53	120	171	785
2003	89	264	178							43	17	69	659
2004													
2005													
2006													
Ave.	140	108	82	15	5				5	41	79	131	556



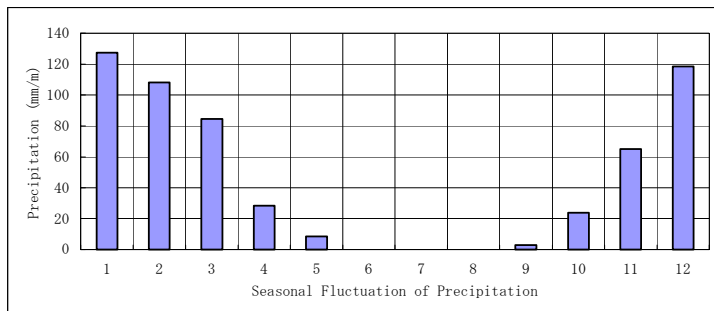
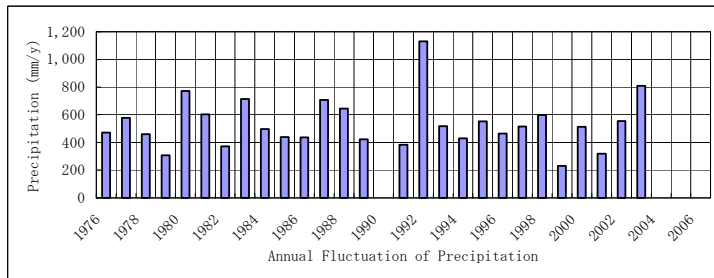
PMD_Code 8 X= 170.2
 PN_Name_E West Bank Water Departement - Al Bira Y= 150.9
 LOC_Name_E Al Bira Z= 870
 GR_Governate_E Ramallah

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	86	149	102	20	3				20		43	97	521
1977	161	58	121	90	1					12	75	19	536
1978	52	77	116	23						76	48	199	590
1979	130	20	64	12						63	17	143	449
1980	165	171	129	14						48	157	206	889
1981	235	124	116	15						42	10	289	831
1982	165	206	159	10							130	31	701
1983	301	368	217	20	6					31	118	118	1,180
1984	203	92	154	43						3	46	30	571
1985	67	316	35	47	1					47	50	54	616
1986	107	150	28	27	29					41	13	63	458
1987	162	52	110	6						37	292	110	768
1988	152	257	127	8						55	13	254	866
1989	93	63	127							9	77	239	608
1990	210	88	98	55	6					16	88	74	634
1991	208	96	134	15	8						49	9	519
1992	332	389	63	7	8					29	143	508	1,479
1993	187	129	50		14						120	310	809
1994	203	142	142	23	7					9	39	33	598
1995	40	114	48	32						17	267	256	773
1996	199	59	218	26						1	92	45	640
1997	194	185	168	17	10					25	10	104	712
1998	187	81	189	2	6					13	75	149	702
1999	143	79	42	8						5	3	34	314
2000	351	82	85	1						2	19	21	560
2001	100	148	9	11	20					41	12	153	495
2002	278	78								6	118	136	617
2003	122	410	239							13	26	249	1,060
2004													
2005													
2006													
Ave.	173	149	114	22	9				20	27	77	140	696



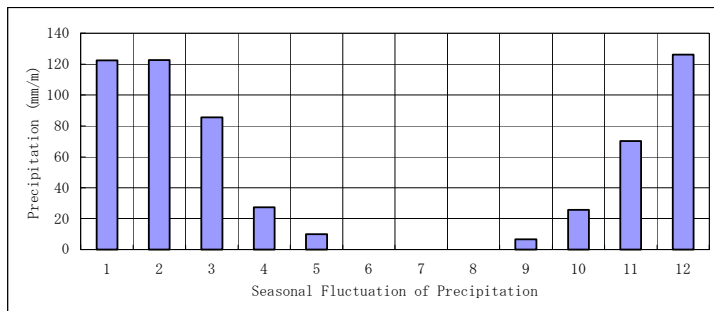
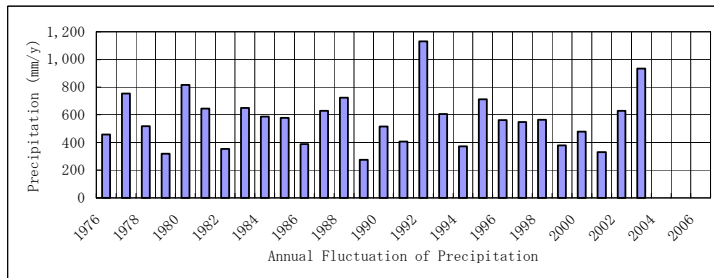
PMD_Code 10 X= 175.0
 PN_Name_E Qabatiya Secondary Boys School Y= 202.0
 LOC_Name_E Qabatiya Z= 300
 GR_Governate_E Jenin

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	73	123	99	33	7						17	120	472
1977	133	46	133	86	2					32	104	41	578
1978	91	18	86	17						59	5	184	460
1979	69	17	56	11	1					30	18	106	307
1980	84	137	127	19						28	113	265	771
1981	223	108	86	23						12	6	147	604
1982	35	140	70	8							84	38	374
1983	170	191	143	11	4						84	112	713
1984	166	73	102	41						6	75	34	496
1985	82	180	11	39						26	42	60	439
1986	99	109	24	45	36					37	55	32	437
1987	113	39	104							71	241	139	707
1988	136	200	87							25	6	193	645
1989	78	43	87							18	64	135	424
1990													
1991	141	88	112							13	15	16	385
1992	256	359	69							5	132	310	1,131
1993	79	78	35								49	277	518
1994	197	74	72	15						19	46	9	431
1995	41	87	32	30	2					9	195	159	553
1996	163	20	139	20							81	45	465
1997	127	178	107	9	8					16	4	67	515
1998	145	68	176		5				3	12	43	148	599
1999	71	39	45	13								64	231
2000	349	60	60									45	513
2001	67	84	12		12					53		92	319
2002	192	43	52	65						9	28	165	554
2003	67	322	161							3	55	203	809
2004													
2005													
2006													
Ave.	127	108	85	28	8				3	24	65	119	535



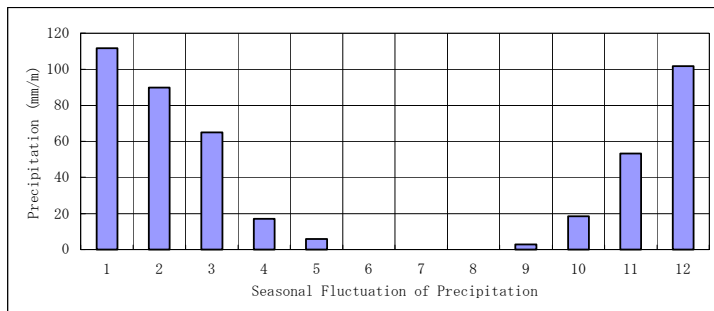
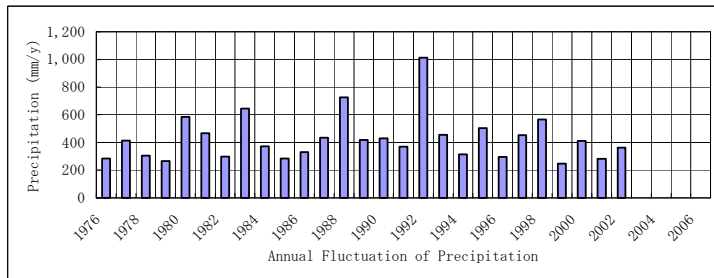
PMD_Code 221970 X= 169.5
 PN_Name_E Rummana Primary School Y= 214.5
 LOC_Name_E Rummana Z= 180
 GR_Governate_E Jenin

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	91	116	98	35						1	44	74	458
1977	155	36	147	97						47	222	50	753
1978	109	31	116							87		176	518
1979	80	13	63	15						31	26	91	319
1980	132	167	112	38						30	109	229	817
1981	289	97	84	10						10	8	147	646
1982	63	118	83	4	2					2	62	20	354
1983	165	167	121	17	5					9	85	81	649
1984	165	52	96	106						6	116	46	588
1985	105	208	7	66						30	60	103	579
1986	77	110	15	16	35					23	37	74	388
1987	86	37	105	2						52	204	141	627
1988	113	254	90							23	13	230	723
1989	56									10	55	154	274
1990	48	120	71	35						27	74	141	516
1991	153	62	106	40						3	32	12	406
1992	230	414	23	2	5					10	132	315	1,130
1993	72	82	52	4	16						88	291	606
1994	117	80	88	1	1					41	29	16	372
1995	55	191	31	32	1					12	210	181	712
1996	162	31	143	37							151	39	563
1997	107	192	107	13	2					51	6	70	547
1998	131	87	136	15					7	15	45	129	564
1999	78	37	86	27							6	145	378
2000	281	83	53	3							2	56	478
2001	48	81	2	1	23					60	7	109	330
2002	160	65	89	40	9					27	63	176	627
2003	104	382	181							9	18	241	934
2004													
2005													
2006													
Ave.	122	123	85	27	10				7	26	70	126	566



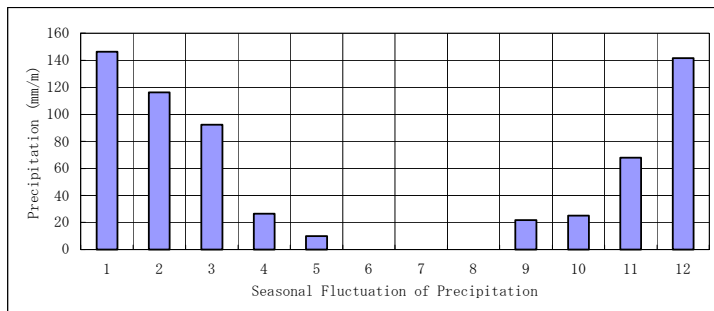
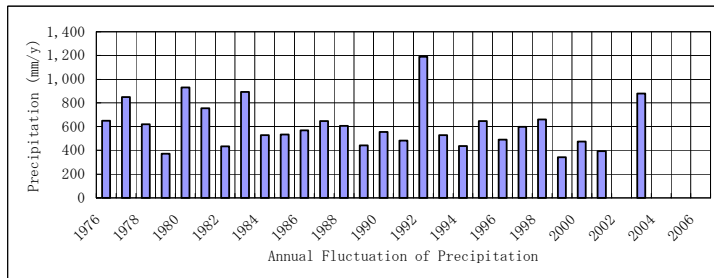
PMD_Code	240150	X=	178.5
PN_Name_E	Jenin Meteorological Station	Y=	207.5
LOC_Name_E	Jenin	Z=	138
GR_Governate_E	Jenin		

	1	2	3	4	5	6	7	8	9	10	11	12	total		
1976	81	104	72	27									284		
1977	14	47	116	67							108	62	414		
1978	63	31	61	9							0	140	305		
1979	61	16	71	3							14	102	265		
1980	99	112	103	27							12	233	585		
1981	191	77	71	8							11	109	467		
1982	31	121	55								64	28	299		
1983	162	183	125								80	96	646		
1984	109	47	78	40							68	32	374		
1985	63	120	8	22							23	49	285		
1986	95	103	14	21							56	42	330		
1987	72	19	81	0							157	105	434		
1988	181	225	92								15	211	725		
1989	86	31	77								60	164	417		
1990	118	91	47	20							58	98	431		
1991	156	60	115	18							12	10	370		
1992	216	367	38								137	254	1,013		
1993	68	68	27	4							49	239	455		
1994	152	54	55	7							40	6	313		
1995	33	88	28								192	162	503		
1996	130	28	15								91	33	297		
1997	154	156	85	10	2						3	43	453		
1998	115	73	144	17	4						49	150	567		
1999	103	35	54	21							1	0	249		
2000	254	52	53	3								3	46	410	
2001	65	67	6	0	11						55	0	77	282	
2002	149	51									9	33	121	363	
2003															
2004															
2005															
2006															
Ave.	112	90	65	17	6						3	18	53	102	427



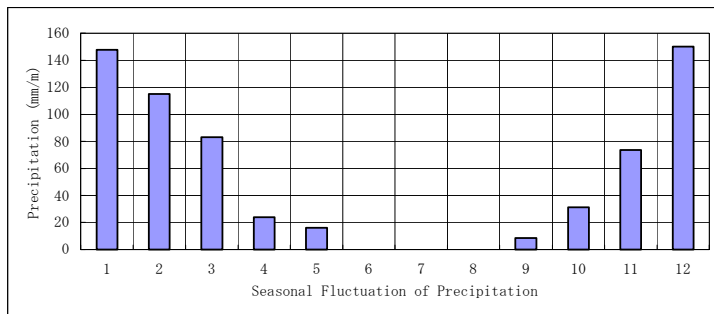
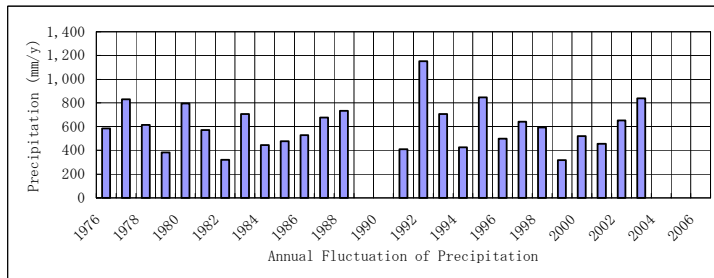
PMD_Code 240200 X= 164.0
 PN_Name_E Ya'bad School Y= 206.0
 LOC_Name_E Ya'bad Z= 350
 GR_Governate_E Jenin

	1	2	3	4	5	6	7	8	9	10	11	12	total	
1976	113	125	132	44	1				15	7	34	179	649	
1977	166	64	184	108	2					67	171	89	849	
1978	151	55	59	14	0					80	5	256	620	
1979	84	26	73	9	3					30	16	130	372	
1980	120	153	127	43						24	109	355	930	
1981	328	143	77	22	1					17	3	166	755	
1982	84	127	76	2	17						90	39	436	
1983	202	238	175	18	5						103	153	895	
1984	174	67	102	57						2	92	36	530	
1985	131	193	10	64						28	38	72	536	
1986	149	129	17	17	67					65	50	78	570	
1987	80	39	114	5						5	55	209	647	
1988	122	187	49							32	12	206	607	
1989	81	37	103								57	163	441	
1990	172	87	60	23						39	88	86	555	
1991	217	86	110	24	6					15	13	12	482	
1992	240	362	67		4					6	184	326	1,190	
1993	79	91	46	6	7						58	239	527	
1994	213	76	78	22						15	21	14	438	
1995	44	89	35	46					2	21	211	202	649	
1996	153	27	148	24						2	87	50	491	
1997	148	187	121	12						37	14	81	599	
1998	146	54	199	7	6					10	65	176	662	
1999	103	42	68	24						3	2	11	92	343
2000	294	56	59	0						2	4	60	475	
2001	76	90	5							84		139	394	
2002											21	50	189	
2003	84	314	201							2	40	237	878	
2004														
2005														
2006														
Ave.	146	116	92	27	10					22	25	68	142	612



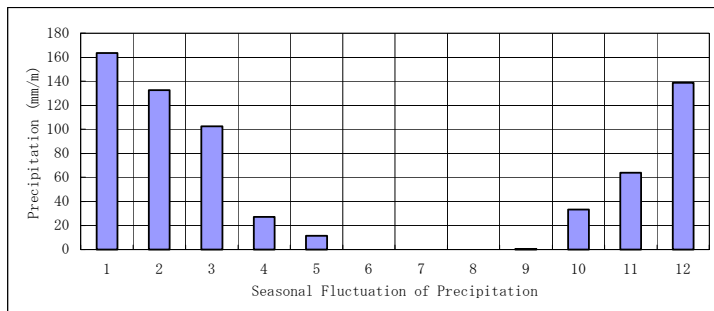
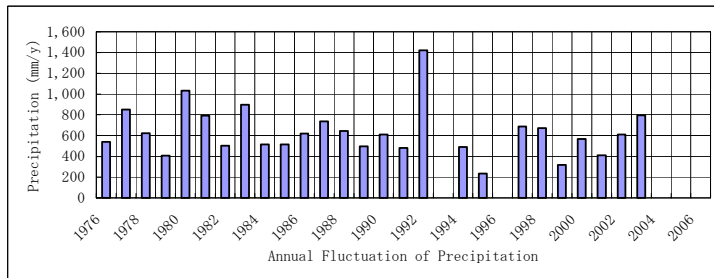
PMD_Code 240220 X= 158.2
 PN_Name_E Qaffeen Boys School Y= 204.5
 LOC_Name_E Qaffin Z= 100
 GR_Governate_E Tulkarm

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	93	117	129	29					14				584
1977	163	61	164	81						63	179	119	830
1978	154	53	46	14						78	8	262	615
1979	81	61	87							32		121	382
1980	109	177	99							25	74	311	795
1981	269	146									15	142	572
1982	49	95	64									87	321
1983	170	163	119	4							108	142	706
1984	145	48	74	55						4	84	35	445
1985	108	165	8	68						12	49	68	477
1986	163	103	25	6	60					35	42	95	529
1987	79	37	106	2									677
1988	172	191							3	66	206	178	677
1989										51	10	308	732
1990													
1991	200	65	103	16	3					20		3	410
1992	253	331	40		8					11	175	336	1,153
1993	92	115	46	25	15						65	352	708
1994	230	70	71	10						11	27	8	426
1995	57	188	27	32						23	302	217	845
1996	181	31	172	11							63	42	499
1997	130	211	145	3	5					59	10	80	642
1998	146	59	131	9	2				2	7	81	158	595
1999	108	31	46	19						2	10	104	319
2000	348	51	60							2	4	54	519
2001	61	91	4	0	20				15	117	16	131	454
2002	195	64	68	47						30	42	209	654
2003	87	268	160							5	86	232	838
2004													
2005													
2006													
Ave.	148	115	83	24	16				9	31	74	150	605



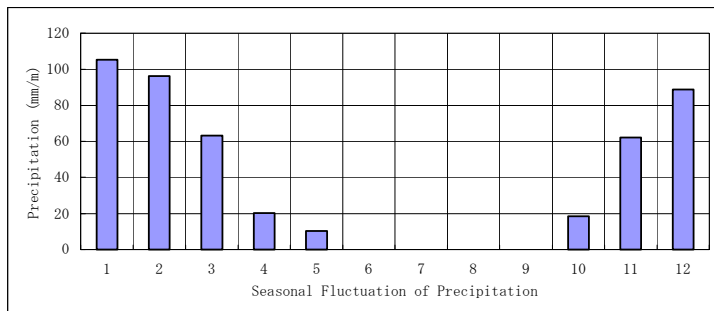
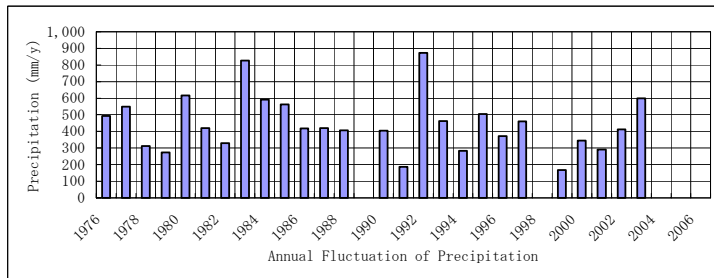
PMD_Code 240250 X= 169.1
 PN_Name_E Arraba School Y= 201.5
 LOC_Name_E Arraba Z= 340
 GR_Governate_E Jenin

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	96	128	126	39	5					3	16	127	539
1977	176	60	187	111						49	188	80	850
1978	129	52	83	16					1	49	10	284	622
1979	94	27	95	8	1					46	4	130	405
1980	108	156	159	31						40	132	406	1,032
1981	316	154	87	17	0					25	7	186	792
1982	103	159	85	3							108	44	501
1983	212	241	157	9	5						129	144	896
1984	166	75	96	49						12	70	46	515
1985	97	221	10	66						16	46	58	514
1986	149	126	22	29	75					75	80	65	620
1987	111	51	130	6						91	202	147	737
1988	115	188	75	11						34	16	206	645
1989	86	46	126							24	66	149	497
1990	170	108	74	22	1					43	89	105	611
1991	225	81	118	23						8	12	14	480
1992	294	449	65							6	142	467	1,422
1993													
1994	223	89	101	6						29	26	17	492
1995	191											43	234
1996											94		
1997	152	230	166	13						39	12	78	688
1998	186	65	199	5	2					3	33	177	670
1999	120	51	48	8								92	318
2000	369	65	68								6	60	567
2001	75	126			13					67	2	129	411
2002	203	66	10	74	2					10	60	186	611
2003	86	305	175								55	176	796
2004													
2005													
2006													
Ave.	164	133	103	27	12				1	33	64	139	633



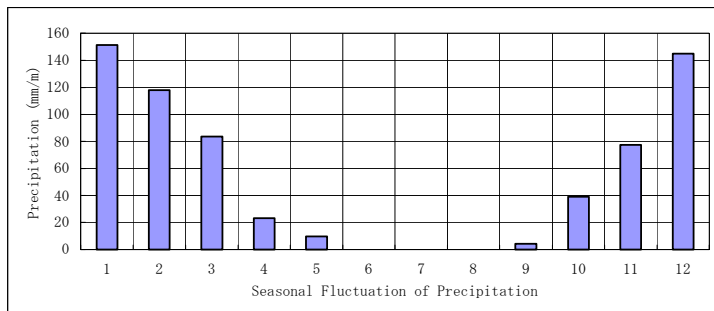
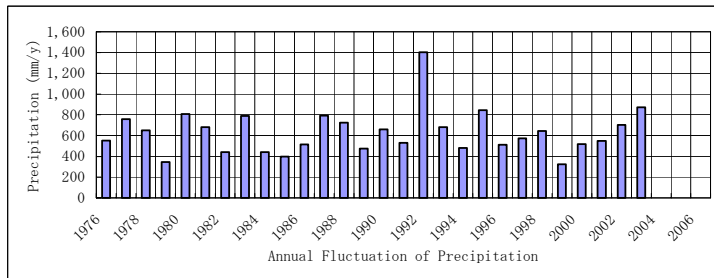
PMD_Code 240350 X= 186.5
 PN_Name_E Raba Primary School Y= 199.3
 LOC_Name_E Raba Z= 500
 GR_Governate_E Jenin

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	69	140	109	31	10					2	38	96	493
1977	128	45	98	67						33	127	53	550
1978	55	29	59	17						13	8	131	312
1979	61	16	47	3						18	42	87	274
1980	83	90	76	14	1					14	107	231	616
1981	149	67	50	15						6	2	129	420
1982	59	104	79	6							62	20	331
1983	225	276	139	16	6						65	98	826
1984	206	68	134	20							132	31	592
1985	27	295	20	61						21	49	89	561
1986	74	90	20	32	24					36	103	38	418
1987	51	39	53	3						31	161	84	421
1988	79	117	65							30	10	106	407
1989													6
1990	128	42	32	14	3					8	78	101	406
1991	66	17	64	17						5	11	8	187
1992	249	259	47		13					13	86	205	873
1993	71	69	44		16						39	225	463
1994	130	59	49	11						9	19	6	283
1995	30	65	27	15						19	200	150	505
1996	134	15	118	20							56	29	372
1997	109	148	87	12	10					23	12	58	460
1998													
1999	54	30	35	10								39	169
2000	235	47	26								3	33	344
2001	59	84	6							37		104	290
2002	147	38	51							16	52	108	412
2003	60	251	108							18	29	133	599
2004													
2005													
2006													
Ave.	105	96	63	20	10				#DIV/0!	18	62	89	445



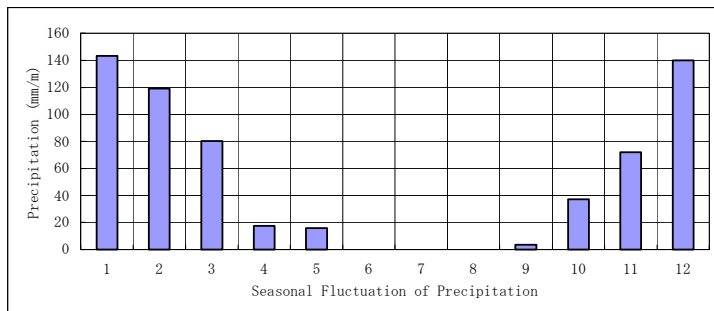
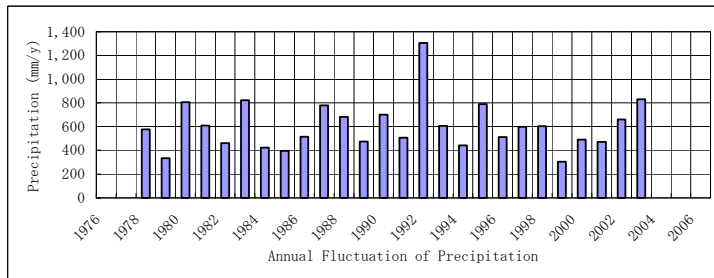
PMD_Code 240400 X= 157.0
 PN_Name_E Attil Secondary School Y= 197.3
 LOC_Name_E Attil Z= 110
 GR_Governate_E Tulkarm

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	92	141	97	39	5				3	6	48	119	550
1977	97	59	150	98	1					35	217	102	759
1978	200	45	45	6						86			268
1979	90	26	49	4	2					33	13	127	344
1980	86	170	66	32						48	98	310	810
1981	307	108	58	38	2					17	8	144	681
1982	71	117	86		17						122	27	440
1983	175	199	137	12	4						133	128	788
1984	121	63	103	38							82	34	441
1985	94	180	11	15						3	32	64	399
1986	147	93	22	14	65					32	59	82	515
1987	96	42	119	2						139	219	174	791
1988	109	202	68	6						55	44	241	725
1989	87	44	70							37	78	157	473
1990	179	125	49	33	0					70	100	104	659
1991	230	79	120	62	4					3	14	21	531
1992	283	410	54	2	3					16	179	456	1,402
1993	123	110	60	10	12					53		315	682
1994	218	88	93							52	16	14	480
1995	62	132	29	37	2					36	340	207	845
1996	183	19	160	21						2	73	52	510
1997	97	191	144	5	17					33	10	77	573
1998	165	50	191	7	6					7	8	60	152
1999	151	42	46	15	0					2	0	7	325
2000	351	55	57	1						0	9	46	518
2001	84	107	10	1	15					175	2	156	549
2002	246	54	57	60						32	39	213	702
2003	96	353	193							6	15	210	873
2004													
2005													
2006													
Ave.	151	118	84	23	10				4	39	77	145	631



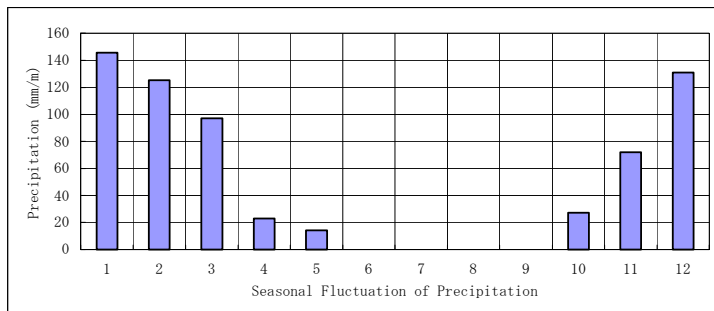
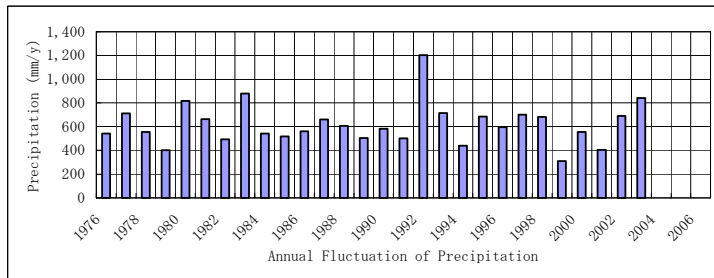
PMD_Code	240480	X=	157.0
PN_Name_E	Deir Al Ghusun	Y=	195.0
LOC_Name_E	Deir al Ghusun	Z=	190
GR_Governate_E	Tulkarm		

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976													
1977													
1978	113	50	47	10						97		260	576
1979	79	30	38	5						28	14	141	333
1980	84	163	67	30						31	95	336	805
1981	319	114	55	36						8	3	76	610
1982	79	120	79	4	17						132	29	460
1983	177	210	156	8	5						129	137	822
1984	120	55	103	46							68	31	424
1985	91	188	9	17						4	27	61	398
1986	149	98	26	17	61					32	57	76	515
1987	86	44	121	2					3	125	225	176	781
1988	107	188	86	5						44	21	230	683
1989	86	42	85							37	66	160	475
1990	155	201	53	35						63	85	110	701
1991	222	76	118	54	5					4	9	21	509
1992	238	385	42	2	42					18	174	404	1,306
1993	110	85	53	5	7						46	303	607
1994	206	75	76	6						44	24	11	441
1995	61	116	40	39	2					25	320	187	790
1996	186	19	145	17						1	88	54	511
1997	96	198	158	10	12					36	19	71	599
1998	150	47	159	8	6				7	17	63	147	604
1999	111	41	44	14					2		2	91	305
2000	324	63	46						1	1	15	43	491
2001	85	99	8	1					5	129	11	134	471
2002	210	61	80	34	2					32	74	170	661
2003	86	328	195							3	33	186	830
2004													
2005													
2006													
Ave.	143	119	80	18	16				4	37	72	140	604



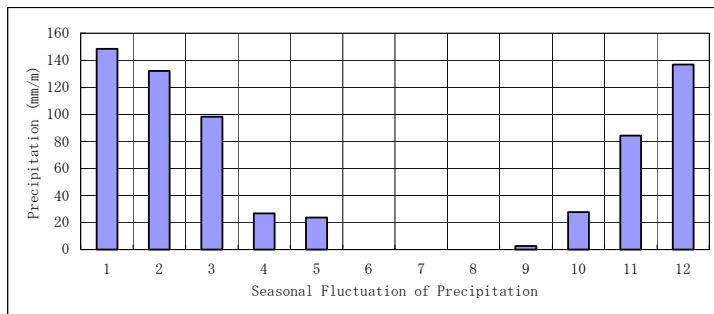
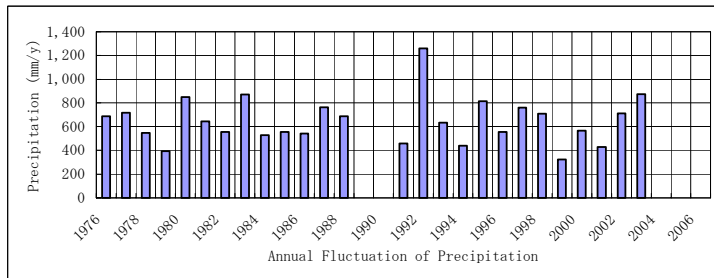
PMD_Code 240500 X= 176.8
 PN_Name_E Meithalun Secondary School Y= 194.8
 LOC_Name_E Meithalun Z= 415
 GR_Governate_E Jenin

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	90	162	92	26	6					6	29	130	541
1977	143	74	150	95	2					49	131	67	711
1978	88	50	87	20						83	6	223	555
1979	115	31	86	8						30	25	107	401
1980	86	160	146	36						17	145	228	817
1981	267	114	57	18						17	6	186	664
1982	89	161	75	5							123	40	493
1983	217	205	175	19	7						119	136	878
1984	179	56	139	40						3	96	31	543
1985	101	258	34	3						20	42	60	518
1986	122	129	26	18	57					47	106	55	560
1987	98	44	115	4						40	243	119	661
1988	107	205	72	11						43	9	162	608
1989	88	47	91							22	71	186	504
1990	156	90	61	30	1					29	79	137	583
1991	223	58	131	45	5					6	13	21	502
1992	232	413	54	0	11					13	138	342	1,202
1993	99	69	60	4	17						52	415	716
1994	169	75	117	8						20	32	18	438
1995	50	98	35	32						49	232	188	684
1996	208	17	191	21							112	49	597
1997	141	256	154	18	7					53	6	68	702
1998	167	86	195	15	40					11	44	127	683
1999	107	51	58	23						4	2	63	308
2000	364	84	51							3	5	49	556
2001	68	105	10	29						56	5	132	405
2002	234	55	83	47	4					28	96	145	690
2003	73	359	175							8	49	179	842
2004													
2005													
2006													
Ave.	146	125	97	23	14				#DIV/0!	27	72	131	620



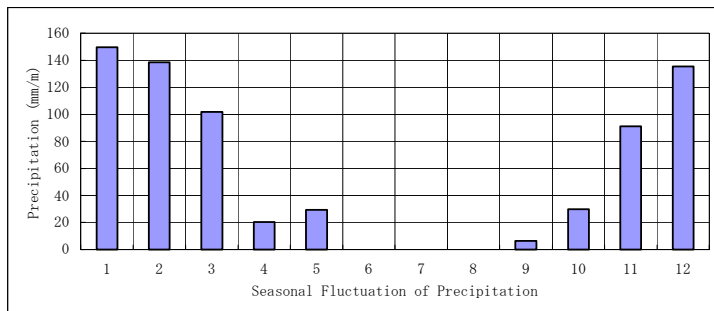
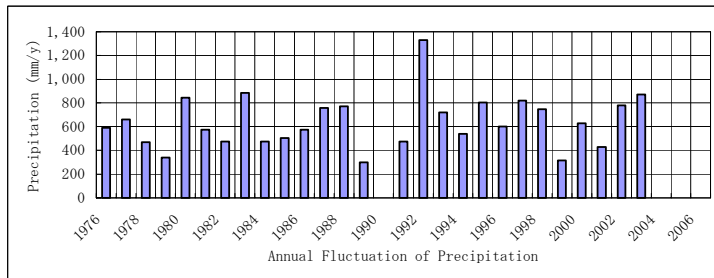
PMD_Code	240751	X=	168.5
PN_Name_E	Burqa Secondary School	Y=	189.8
LOC_Name_E	Burqa	Z=	600
GR_Governate_E	Nablus		

	1	2	3	4	5	6	7	8	9	10	11	12	total	
1976	93	163	127	27						19	100	160	689	
1977	143	78	146	98						48	125	81	718	
1978	86	63	86	18						89		207	548	
1979	117	19	84	7						44	7	116	394	
1980	128	147	113	19						25	153	264	849	
1981	202	159	77	17						7	5	179	645	
1982	91	149	78	4	48						149	37	556	
1983	215	205	181	28	5					3	138	97	871	
1984	143	55	155	39						3	107	26	527	
1985	83	286	25	57						22	27	56	555	
1986	136	131	29	18	97					27	42	62	543	
1987	116	50	115	3						58	291	131	763	
1988	125	196	91							36	12	229	688	
1989														
1990														
1991	204	69	110	32	4						20	20	459	
1992	254	313	56	1	15					5	197	420	1,260	
1993	91	94	74	13	12						35	315	633	
1994	181	90	90	7						18	30	25	440	
1995	61	171	36	33						2	18	312	813	
1996	170	21	184	20							98	62	554	
1997	155	259	173	38	13					46	8	68	760	
1998	182	69	182	7	7					4	10	68	182	710
1999	143	48	49		30					1	1	4	49	325
2000	397	69	56							4	7	1	33	565
2001	68	103	7		27						78		146	428
2002	198	56	55	76	4						43	54	226	711
2003	80	370	184								5	41	192	872
2004														
2005														
2006														
Ave.	149	132	98	27	24					3	28	84	137	649



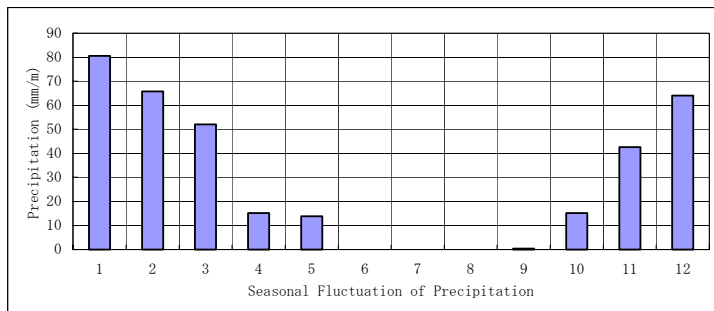
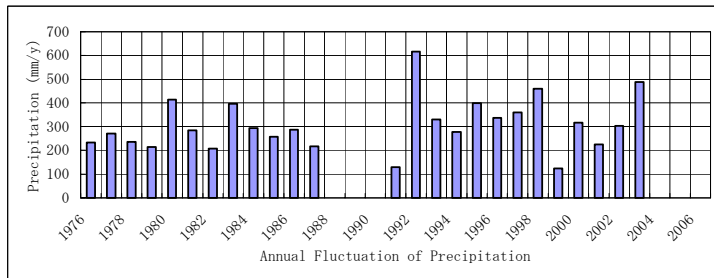
PMD_Code 240850 X= 168.5
 PN_Name_E Sabastiya School Y= 187.0
 LOC_Name_E Sabastiya Z= 335
 GR_Governate_E Nablus

	1	2	3	4	5	6	7	8	9	10	11	12	total	
1976	101	134	111	27							75	143	591	
1977	142	63	126	84						43	128	74	660	
1978	71	47	89	15						46		201	468	
1979	104	20	54	6						41		115	339	
1980	96	152	133	10						18	156	279	843	
1981	223	93	64	5								188	573	
1982	71	145	87								141	30	474	
1983	214	244	180	14							124	109	885	
1984	119	51	151	30							100	25	476	
1985	88	277	21	30						6	35	48	505	
1986	128	161	34	17	87					41	52	56	574	
1987	138	44	103							56	275	144	758	
1988	113	300	89							54	11	204	771	
1989	60									7	67	166	300	
1990														
1991	227	73	121	19						4	21	11	475	
1992	292	366	60	5	29					4	154	421	1,331	
1993	112	98	87	13	20						55	337	721	
1994	197	96	118	37						42	23	27	539	
1995	64	130	37	32						39	325	177	803	
1996	175	28	206	19							113	59	600	
1997	160	303	209	15	15					35	11	73	821	
1998	183	72	215	10	4						12	69	171	747
1999	136	53	41	21						2	2	5	57	316
2000	449	92	59	1						2	6	20	628	
2001	62	128	3	2	21					83		132	430	
2002	238	65	85	41						57	109	184	778	
2003	78	369	164							9	46	206	870	
2004														
2005														
2006														
Ave.	150	139	102	20	29					6	30	91	135	640



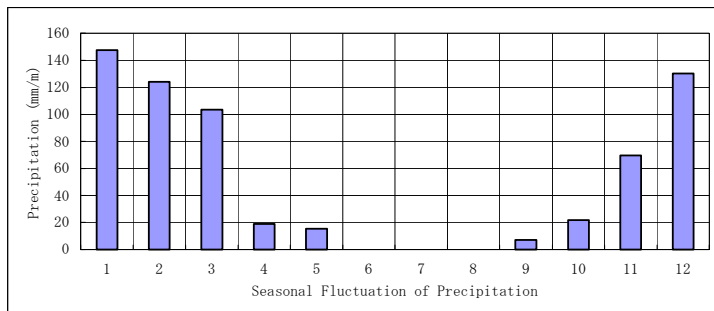
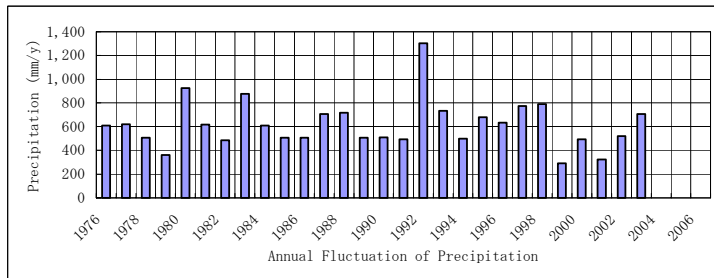
PMD_Code 240900 X= 186.5
 PN_Name_E Tammun Primary School Y= 187.8
 LOC_Name_E Tammun Z= 340
 GR_Governate_E Tubas

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	29	51	74	19					0				233
1977	97	18	47	9						13	67	20	270
1978	34	22	34							35	2	110	236
1979	50	13	48							27	5	71	214
1980	60	73	47							14	89	132	414
1981	98	40	33							6	1	107	285
1982	37	66	42								51	10	207
1983	90	119	72	5							67	43	397
1984	101	30	72	17							61	13	295
1985	34	121	10	30						7	24	32	258
1986	48	79	22	50	24					7	26	32	287
1987	65	55								23	9	65	218
1988													
1989													
1990													
1991	129											1	130
1992	127	161	40							5	88	195	616
1993	49	57	33	4							30	159	330
1994	106	60	63	4						19	16	10	277
1995	18	40	33	9	4					7	176	114	399
1996	107	15	111	22							55	28	337
1997	114	138	99	10									360
1998	116	65	122	3						13	27	113	460
1999	54	31	16									23	124
2000	227	40	36								4	12	318
2001	57	68	5							21		76	225
2002	124	27	51	16						32	44	10	304
2003	48	191	89							1	30	129	488
2004													
2005													
2006													
Ave.	81	66	52	15	14				0	15	43	64	307



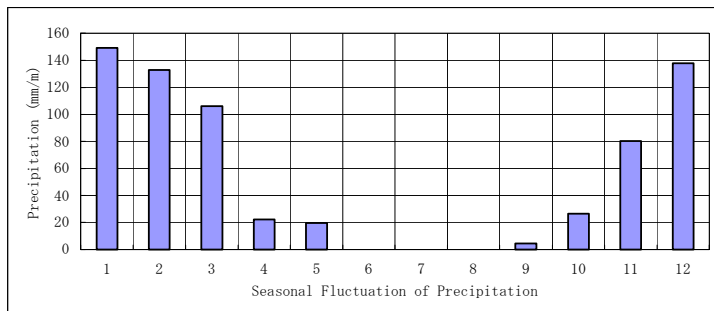
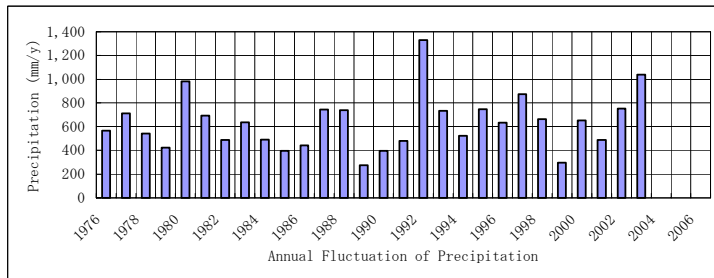
PMD_Code 240950 X= 178.0
 PN_Name_E Talluza Primary School Y= 186.3
 LOC_Name_E Talluza Z= 500
 GR_Governate_E Nablus

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	96	144	138	44					7		46	136	611
1977	154	72	139	63						25	120	46	618
1978	72	52	90	10						61	2	222	508
1979	109	18	68	6						40	23	100	362
1980	121	160	154	15	1					32	177	267	926
1981	224	101	63	9						13	8	199	617
1982	94	137	97	4	11					4	120	20	485
1983	215	261	171	17	5					0	102	106	877
1984	185	68	170	58						7	98	25	610
1985	72	266	19	38	0					13	48	49	505
1986	95	157	49	27	60					13	56	52	508
1987	149	51	123	2						25	236	120	707
1988	109	249	104	11						46	16	181	716
1989	68	28	92	3						10	53	253	507
1990	126	93	56	29						22	76	110	511
1991	231	70	107	17	5					23	32	12	495
1992	266	397	61	5	37					4	151	384	1,303
1993	142	84	76	2	9						54	366	734
1994	204	86	131							29	24	25	499
1995	60	106	37	25						25	249	177	679
1996	198	20	231	35							90	59	634
1997	170	260	187	20	10					40	11	78	775
1998	185	77	222	5	31					16	51	205	791
1999	126	49	39	23							8	49	292
2000	351	60	52	0						1	14	15	493
2001	53	101	6	2	14					40	7	103	325
2002	191	27	76	28	3					27	48	122	522
2003	66	282	143							7	34	173	705
2004													
2005													
2006													
Ave.	147	124	104	19	15				7	22	70	130	618



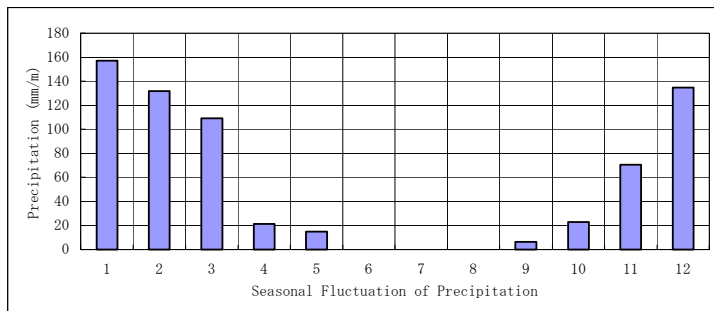
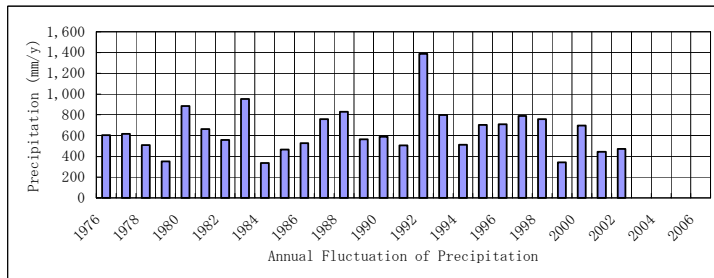
PMD_Code 241030 X= 163.5
 PN_Name_E Kafr Qaddum Y= 181.0
 LOC_Name_E Kafr Qaddum Z= 400
 GR_Governate_E Qalqiia

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	126	147	155	16	3					1	50	69	566
1977	156	79	145	89						23	147	73	712
1978	22	72	96	8						63		282	542
1979	125	15	81	3						40	15	147	424
1980	110	189	160	17						23	185	299	982
1981	204	169	62	19						8	13	219	694
1982	94	130	89								160	15	488
1983	206	306	125										637
1984	127	97	119	30							98	20	491
1985	60	190	17	34						23	26	47	396
1986	111	147	38	29	43					28		47	442
1987	166	40	87							40	265	146	744
1988	132	238	75	8						67	10	210	740
1989	35	37								2	31	172	275
1990	53	50	39	50						16	94	93	395
1991	245	78	100	22	5					8	14	9	480
1992	240	338	75	3	22					10	157	486	1,331
1993	131	102	91	2	10						80	317	732
1994	185	123	144	6						21	20	25	524
1995	77	115	34	38						24	301	161	749
1996	226	22	200	24							111	53	635
1997	176	265	234	19	42					53	13	72	874
1998	141	52	209	4					4	9	84	160	663
1999	147	48	39	16						1	2	45	297
2000	450	101	46							5	15	36	652
2001	94	108	9	8	18					92	1	156	487
2002	262	51	131	45	15					40	68	142	753
2003	77	416	265							13	47	220	1,038
2004													
2005													
2006													
Ave.	149	133	106	22	20				4	26	80	138	634



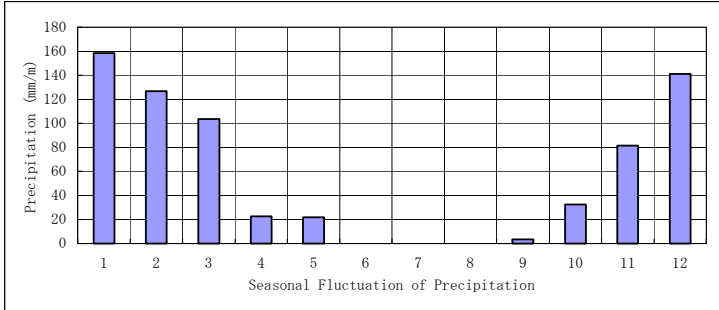
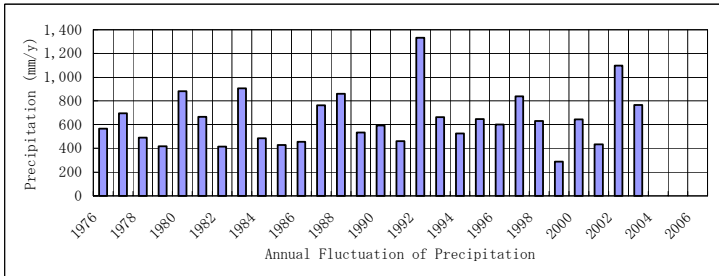
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PN_Name_E	Nablus Meteorological Station	Y=	180.0
LOC_Name_E	Nablus	Z=	533
GR_Governate_E	Nablus		

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	93	152	150	27					23	4	47	108	605
1977	159	73	128	86	2				0	33	90	47	617
1978	79	60	83	8						83	3	193	508
1979	117	20	76	5	0			1		20	7	104	350
1980	114	165	156	22	2					40	159	227	883
1981	211	143	67	23					0	15	9	193	661
1982	93	171	130	7	2						135	20	558
1983	267	323	220	15	4					10		116	954
1984	155	85							1		70	24	336
1985	66	245	20	23	1					22	30	59	465
1986	93	163	49	47	65	0				20	47	43	527
1987	130	62	120	2					1	52	250	141	758
1988	127	307	95							53	23	224	829
1989	96	47	114							16	56	237	566
1990	132	99	73	53						10	95	125	587
1991	251	74	104	30	8					4	24	10	505
1992	261	385	70	5	29	1				13	154	472	1,388
1993	142	118	69	6	19	0					85	361	799
1994	193	114	129	9						15	22	29	510
1995	58	95	43	35	0					21	264	186	702
1996	230	36	229	33						2	119	59	708
1997	158	199	233	23	40					34	16	85	789
1998	148	92	245	5	8				18	16	60	167	759
1999	154	67	40	21					2	2	2	55	341
2000	471	85	79	0						6	16	39	697
2001	85	123	9	4	31					64	4	124	442
2002	158	57								21	75	162	472
2003										3	50	168	
2004													
2005													
2006													
Ave.	157	132	109	21	15				6	23	71	135	641



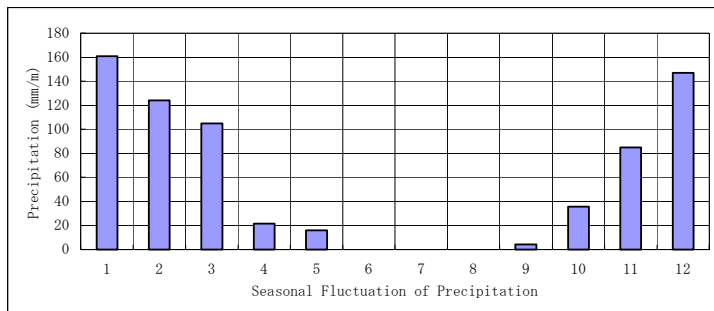
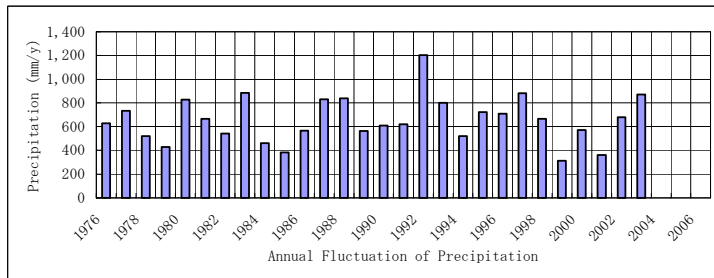
PMD_Code 241140 X= 162.5
 PN_Name_E Hajja Secondary School Y= 178.0
 LOC_Name_E Hajja Z= 350
 GR_Governate_E Qalqilia

	1	2	3	4	5	6	7	8	9	10	11	12	total	
1976	108	138	151	15									567	
1977	159	64	151	71						42	141	67	696	
1978	91	55	41	9						60		234	490	
1979	134	17	82	9						32	7	136	417	
1980	109	167	122	8						29	179	268	882	
1981	244	132	45	16						0	13	214	665	
1982	73	138	104	21							75	4	416	
1983	243	259	128	7							142	128	908	
1984	123	79	141	56							65	22	485	
1985	58	204	13	37						31	32	53	428	
1986	101	144	44	19	50					24	27	47	456	
1987	131	46	89	3						43	285	166	763	
1988	126	297	68	13						81	14	261	861	
1989	77	34	99							10	74	238	532	
1990	167	89	65	39						16	102	116	594	
1991	176	123	102	32							18	10	460	
1992	263	313	52	4	19						175	508	1,333	
1993	119	96	65		9						74	300	663	
1994	225	112	130	3							28	27	526	
1995	69	97	30	30						18	251	154	647	
1996	210	20	202	15							96	59	602	
1997	172	231	251	17	29					43	20	75	838	
1998	128	53	182	8	10					15	88	147	631	
1999	141	46	42	21						4	2	32	289	
2000	450	96	43								14	42	645	
2001	113	121								74		128	435	
2002	375	81	182	65	16					38	92	251	1,099	
2003	52	298	178							25	62	153	767	
2004														
2005														
2006														
Ave.	158	127	104	23	22					4	33	81	141	646



PMD_Code 241200 X= 162.5
 PN_Name_E Jinsafut School Y= 176.3
 LOC_Name_E Jinsafut Z= 430
 GR_Governate_E Qalqilia

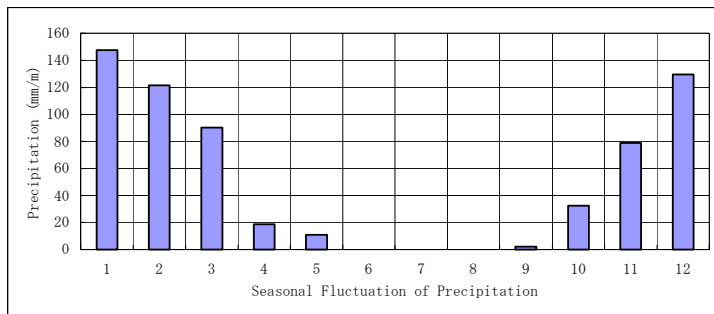
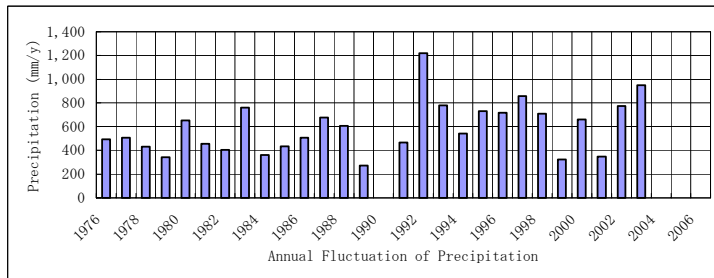
	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	92	163	137	23					7		66	142	630
1977	162	68	150	80	2					53	147	72	735
1978	76	51	69	5						86		234	522
1979	130	24	82	7						33	13	139	427
1980	106	153	112	9						28	173	248	828
1981	240	99	51	22						8	6	240	665
1982	84	135	170	1							138	15	542
1983	229	241	124	10							155	126	885
1984	132	56	130	61							58	23	460
1985		218	18	28						40	28	50	381
1986	103	156	28	39	44					35	26	137	567
1987	127	40	136	3						46	315	163	830
1988	182	281	86	16						26	8	242	840
1989	101	33	112							11	79	229	564
1990	172	69	69	48						28	108	115	610
1991	210	134	170	60						19	19	10	622
1992	220	291	57	4	19					5	148	461	1,203
1993	145	97	72	1	4						72	412	802
1994	205	115	131	4						12	33	20	520
1995	54	107	41	32						34	288	168	724
1996	241	37	238	25						102		68	710
1997	204	249	209	7	29					61	19	105	883
1998	180	47	174	6	6					6	71	176	666
1999	161	63	29	16						2		42	313
2000	395	88	39								10	38	571
2001	105	84	3	1						70	6	93	362
2002	204	58	112	37	8					30	88	144	681
2003	81	316	192							17	60	205	870
2004													
2005													
2006													
Ave.	161	124	105	22	16				4	36	85	147	658



PMD_Code 241250
 PN_Name_E Azzun School
 LOC_Name_E Azzun
 GR_Governate_E Qalqilia

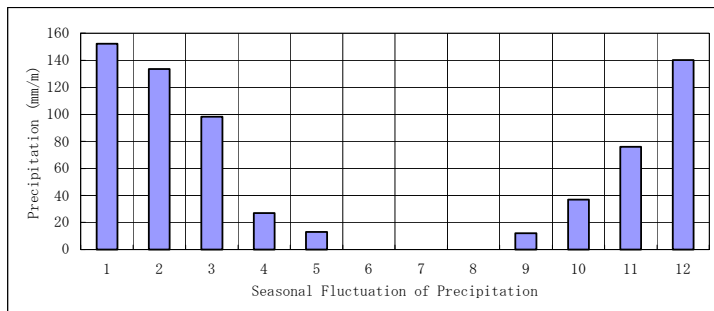
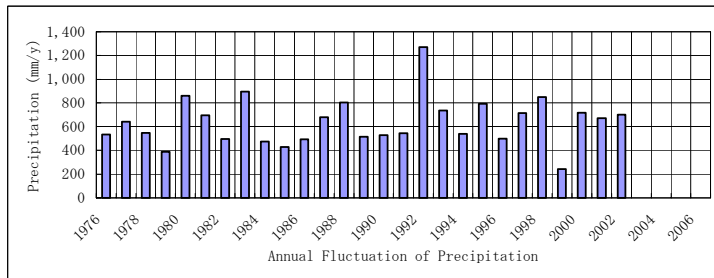
X= 155.5
 Y= 175.9
 Z= 260

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	72	105	99	12					5	6	77	120	495
1977	134	54	97	54	3					26	85	55	507
1978	57	74	55	3						71		171	431
1979	109	17	59							34	2	121	342
1980	69	112	98	3						40	139	193	653
1981	179	69	30	21						6	5	147	455
1982	62	103	86	2							135	17	406
1983	185	208	110	4	1						147	105	759
1984	96	55	86	56						1	48	20	361
1985	62	210	16	32						53	19	46	436
1986	136	157	25	19	42					45	21	63	508
1987	87	30	70	4						39	297	152	678
1988	96	212	33							67	4	194	605
1989											60	213	273
1990													
1991	213	104	106	36	5							3	467
1992	206	326	54	8	17					1	160	447	1,218
1993	141	111	63	1	11						93	359	779
1994	219	96	166	5	1					18	22	15	541
1995	72	124	35	31						19	286	164	731
1996	263	36	210	23							112	73	717
1997	184	275	208	16	14					44	27	88	857
1998	184	50	203	3	8				3	11	66	183	710
1999	157	53	38	23					1	3	2	48	324
2000	448	105	54								11	42	660
2001	74	68	3	2					1	93	1	107	348
2002	257	63	101	55	7					45	101	146	776
2003	75	340	243							28	54	209	949
2004													
2005													
2006													
Ave.	148	121	90	19	11				2	32	79	130	592



PMD_Code	241300	X=	163.4
PN_Name_E	Deir Istiya	Y=	170.8
LOC_Name_E	Deir Istiya	Z=	432
GR_Governate_E	Salfit		

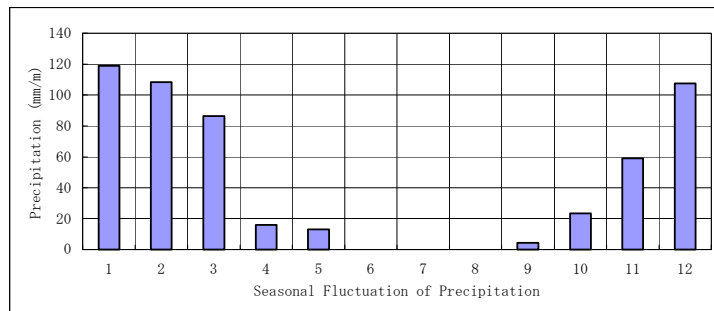
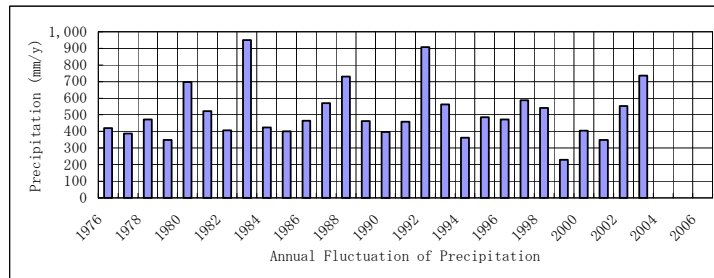
	1	2	3	4	5	6	7	8	9	10	11	12	total	
1976	60	145	112	25	5				8				533	
1977	136	62	142	84	2					43	115	60	643	
1978	89	61	86	17						99		195	547	
1979	108	20	79	15						30	4	131	387	
1980	101	185	130	9	1					32	160	242	859	
1981	254	123	68	21						26	10	194	696	
1982	112	141	120	1							109	14	497	
1983	224	249	170	17							105	132	896	
1984	137	49	125	53						2	66	41	474	
1985	53	217	12	27	3					38	32	47	429	
1986	77	182	33	11	55					44	35	56	494	
1987	118	43	90	5						29	250	145	679	
1988	98	266	52	8						117	11	252	803	
1989	81	44	100	40						2	59	187	514	
1990	149	64	71	41						25	91	86	527	
1991	254	86	125	36	5					3	28	8	545	
1992	235	391	54	7						12	140	431	1,270	
1993	130	97	41		30							73	364	736
1994	214	126	129	4	2					16	15	4	29	540
1995	10	171	81	53							53	247	178	793
1996	176	20	132									99	72	499
1997	132	251	243	33								5	53	716
1998	310	60	230	80								44	125	849
1999	30	199	4	9										242
2000	511	90	23									74	20	718
2001	70	207								109	34	252	672	
2002	244	56	121							20	47	214	702	
2003			80											
2004														
2005														
2006														
Ave.	152	134	98	27	13					12	37	76	140	639



PMD_Code 241350
 PN_Name_E Aqraba School
 LOC_Name_E Aqraba
 GR_Governate_E Nablus

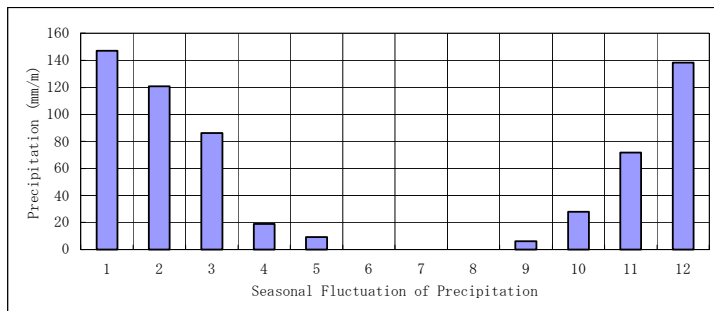
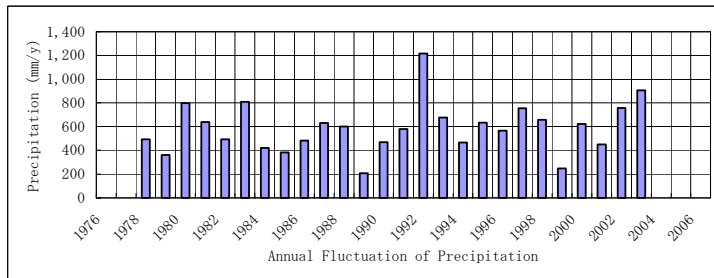
X= 182.7
 Y= 170.5
 Z= 630

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	46	115	111	10	4				5				419
1977	103	20	89	55						12	89	21	388
1978	56	62	95	10						52	13	184	471
1979	74	27	87	10						12	20	121	350
1980	93	120	103	1						54	135	191	697
1981	164	101	51	14						12	15	165	522
1982	90	134	106	6							68	2	406
1983	224	267	188	9						45	117	99	949
1984	133	58	161	21							36	16	424
1985	45	201	21	28						31	30	47	401
1986	63	163	30	63	55					26	29	36	464
1987	104	30	88							20	223	105	569
1988	112	268	94	9						49	16	183	730
1989	91	29	74							13	50	206	462
1990	111	57	54	29						14	60	74	398
1991	239	67	92	12						4	43		457
1992	184	271	53	3	5					8	75	311	909
1993	88	62	43	3	12						64	290	562
1994	155	72	85	5						14	14	18	363
1995	26	67	31	18						9	183	154	487
1996	160	32	122	20							104	34	472
1997	135	190	151	12	4					24	7	65	588
1998	142	59	135	2	7				4	36	67	90	541
1999	107	52	27	14								29	228
2000	254	62	62								11	16	405
2001	61	118	15	4	10					52	6	82	348
2002	191	35	98	26	8					24	47	124	553
2003	84	299	157							4	17	175	736
2004													
2005													
2006													
Ave.	119	108	86	16	13				4	23	59	108	511



PMD_Code	241400	X=	157.5
PN_Name_E	Biddya Secondary School	Y=	169.0
LOC_Name_E	Biddya	Z=	315
GR_Governate_E	Salfit		

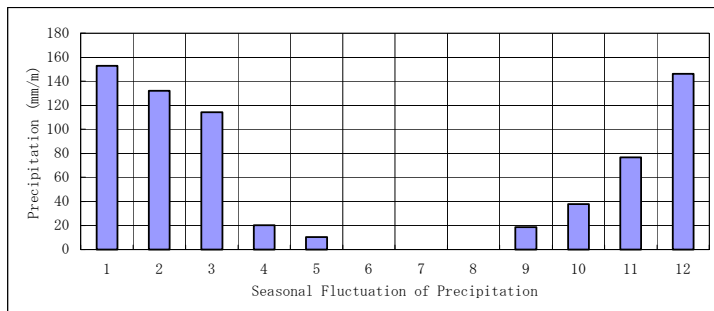
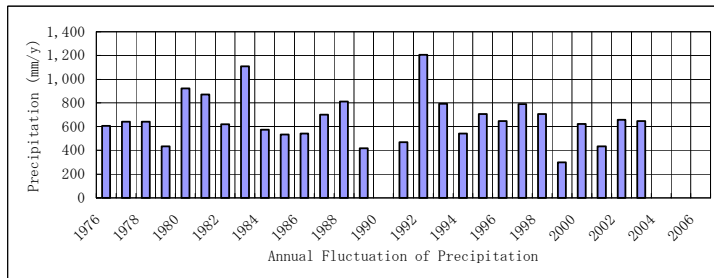
	1	2	3	4	5	6	7	8	9	10	11	12	total
1976													
1977													
1978	82	56	65							90		201	494
1979	94	15	62	13						26	3	146	360
1980	93	143	127	5						31	148	251	797
1981	246	121	43	20						3	12	194	639
1982	101	104	125	4	3						152	8	496
1983	189	211	160	12	2					1	98	136	809
1984	139	37	85	43						3	73	43	422
1985	50	202	10	43						29	15	36	383
1986	95	189	25	12	31					42	38	52	484
1987	96	39	82	5						40	253	117	631
1988	91	210	63	7						10	13	208	602
1989	68	46	94										208
1990	116	49	88	37	3					11	79	88	470
1991	271	101	139	30								40	581
1992	223	367	49		3					13	139	421	1,215
1993	103	89	33		3						63	386	677
1994	188	111	85	6						27	22	27	467
1995	39	70	31	22						18	276	178	634
1996	213	26	142	31							101	53	566
1997	160	235	195	13	14					58	18	61	755
1998	197	56	198	1	14				10	7	43	132	658
1999	136	58	20							0	1	35	249
2000	411	100	55						2		9	46	624
2001	90	106	2	2	8					101	2	140	451
2002	246	59	76	51	12					34	43	236	757
2003	90	340	186							17	51	223	906
2004													
2005													
2006													
Ave.	147	121	86	19	9				6	28	72	138	590



PMD_Code 241450
 PN_Name_E Salfit
 LOC_Name_E Salfit
 GR_Governate_E Salfit

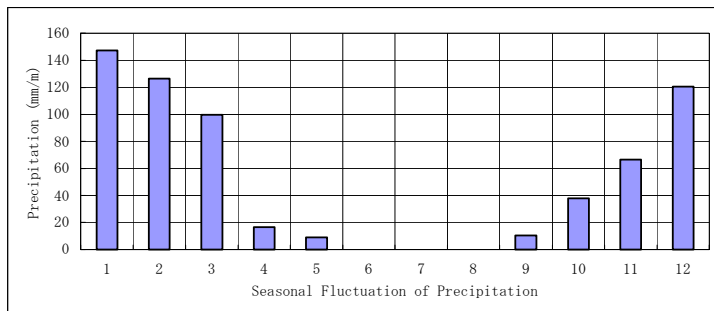
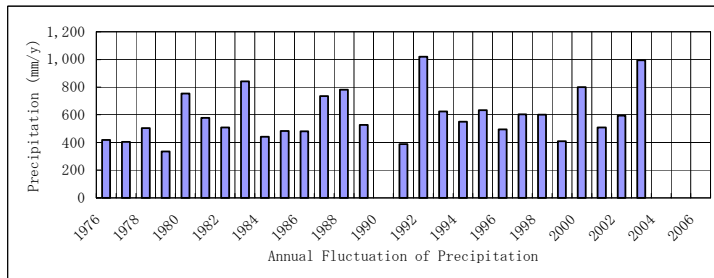
X= 167.0
 Y= 165.5
 Z= 520

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	68	163	134	20	5				25	5	64	123	606
1977	149	50	173	89	1					33	98	48	641
1978	90	89	120	11						90			642
1979	117	24	83	13						30	7	160	433
1980	113	206	127	12	1					35	175	253	922
1981	284	144	133	17						37	14	242	871
1982	139	176	157	2	2						128	18	621
1983	254	366	215	21	2						118	133	1,108
1984	198	56	173	46						6	60	37	576
1985	82	279	16	35	3					54	24	43	534
1986	94	180	38	21	50					58	36	64	541
1987	130	49	99	9						26	270	119	702
1988	105	277	89	11						83	22	224	812
1989	94	45									72	208	418
1990													
1991	174	81	129	29	19						30	7	468
1992	209	346	59								135	457	1,205
1993	146	95	44	6							87	414	792
1994	207	124	108	7						33	28	33	540
1995	39	99	49	30						10	290	189	706
1996	195	41	193	34							112	72	647
1997	154	258	210	18	4					48	10	90	791
1998	168	73	193	1	6				13	17	96	140	706
1999	131	62	34	23							2	48	300
2000	403	95	69	0							13	44	624
2001	80	119	5	4	21					76	16	114	433
2002	210	49	78	30	12					32	73	176	659
2003	96	28	243							9	18	253	647
2004													
2005													
2006													
Ave.	153	132	114	20	10				19	38	77	146	665



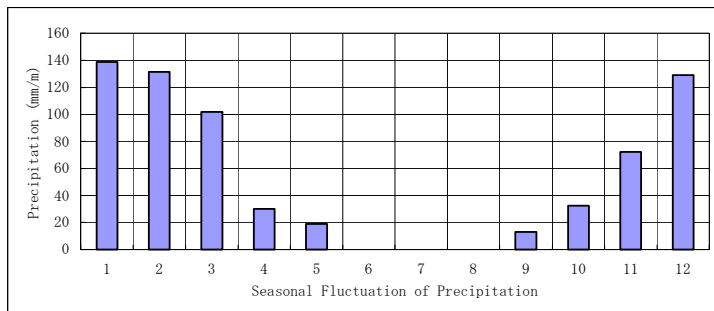
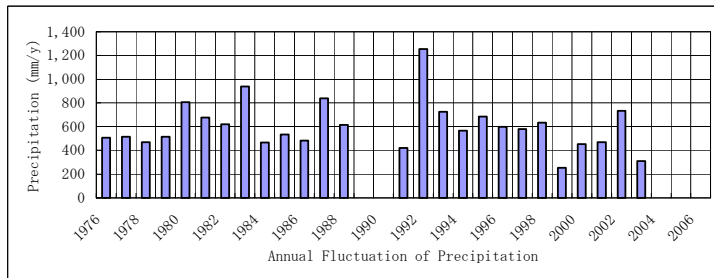
PMD_Code 241470 X= 177.8
 PN_Name_E Qaryut Primary School Y= 164.0
 LOC_Name_E Qaryut Z= 790
 GR_Governate_E Nablus

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	45	114	101	14					10	2	49	84	420
1977	106	27	120	50	1					13	63	25	404
1978	61	62	95	11						73	16	186	503
1979	89	25	83	6						15	7	110	335
1980	94	139	118	11	0					33	144	214	752
1981	195	94	81	10						17	10	172	577
1982	114	141	128	6							103	16	507
1983	183	289	153	13	3						97	103	841
1984	145	50	139	32						2	39	33	441
1985	68	232	27	27	0					60	28	42	484
1986	93	178	26	36	37					43	27	41	481
1987	161	32	103	5						38	276	120	734
1988	138	240	94	14						71	30	196	783
1989	74	49	104							53	64	183	527
1990													
1991	183	75	102	16	4							7	388
1992	222	268	49	19	6					18	91	345	1,019
1993	112	59	32	1	17						84	319	624
1994	215	90	114	16						47	44	23	548
1995	26	95	47	22						63	212	168	633
1996	163	40	139	34							84	35	494
1997	142	194	160	10	2					32	9	54	603
1998	164	72	145	1	6								601
1999	194	123	43	13					11	28	72	103	410
2000	490	141	116									53	801
2001	122	156								69	5	159	509
2002	264	19			22					43	81	166	594
2003	111	416	175								28	264	993
2004													
2005													
2006													
Ave.	147	127	100	17	9				11	38	67	121	593



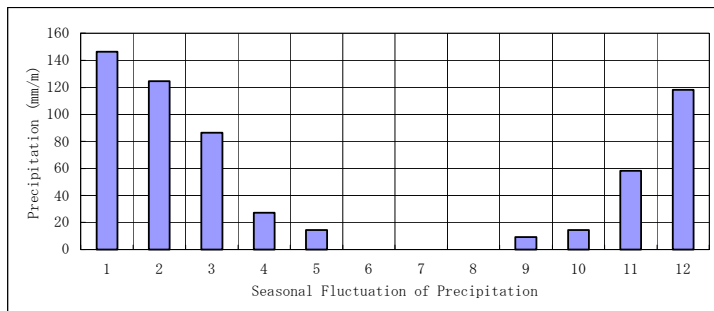
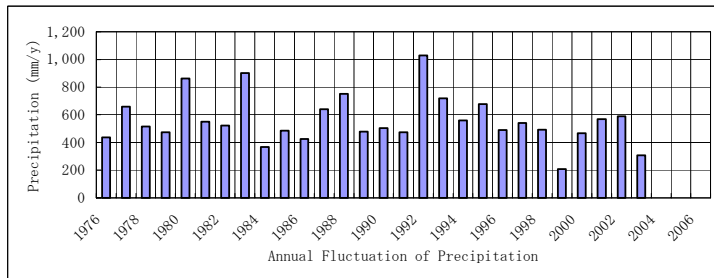
PMD_Code 242400 X= 166.0
 PN_Name_E Beituniya Secondary Boys School Y= 143.7
 LOC_Name_E Beituniya Z= 810
 GR_Governate_E Ramallah

	1	2	3	4	5	6	7	8	9	10	11	12	total	
1976	64	119	98	81	1						35	109	506	
1977	162	52	142	107						15		34	513	
1978	54	73		16						91	4	230	468	
1979	146	33	93	14						66	19	143	514	
1980	145	158	120	3						34	185	163	807	
1981	167	97	110	15						39	7	244	677	
1982	133	183	147	4	1						126	25	619	
1983	250	293	166	10							108	115	940	
1984	154	55	137	36							53	32	466	
1985	39	278	35	54						56	30	44	535	
1986	106	136	23	55	34					48	8	75	484	
1987	138	43	186	2						56	291	124	840	
1988	130	192								47	10	235	614	
1989														
1990														
1991	99	159	108	14							35	5	420	
1992	216	389	64	3	11					17	102	452	1,253	
1993	147	142	42	4	15					5	96	274	724	
1994	119	164	150	53						3	53	28	569	
1995	53	115	44							12	257	205	684	
1996	175	94	183	23							89	36	599	
1997	138	143	149							33	27	94	582	
1998	160	75	161	7					13	19	43	156	634	
1999	118	59	37	12						5	1	22	253	
2000	260	56	91								12	34	453	
2001	97	124	9		51					46	11	132	470	
2002	231	60	45	88						5	136	169	733	
2003	107									22		182	311	
2004														
2005														
2006														
Ave.	139	131	102	30	19					13	33	72	129	603



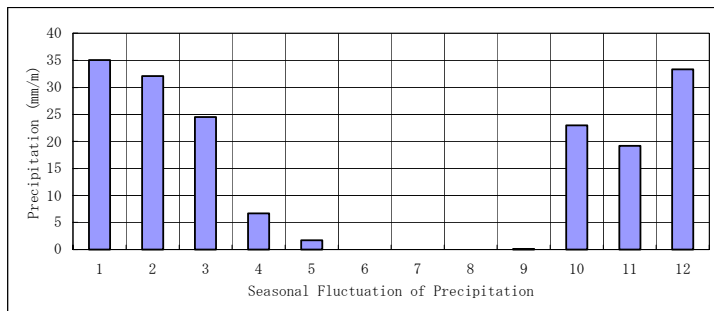
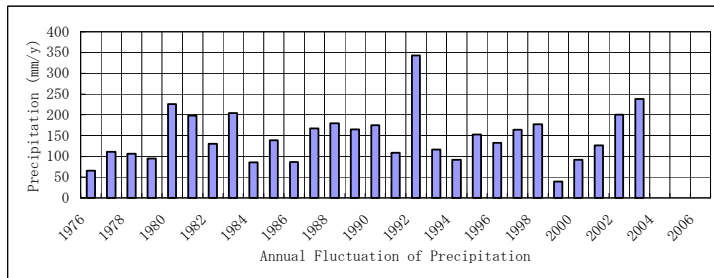
PMD_Code 248141 X= 159.70
 PN_Name_E Hebron Meteorological Station Y= 104.00
 LOC_Name_E Hebron (Al Khalil) Z= 1005
 GR_Governate_E Hebron

	1	2	3	4	5	6	7	8	9	10	11	12	total	
1976	51	144	67	21	7				21	3	33	90	437	
1977	245	67	106	155						17	33	37	659	
1978	76	63	97	7						38	36	197	514	
1979	154	34	100	14						17	32	123	474	
1980	167	166	79	19						20	125	286	862	
1981	102	92	106	27						9	5	208	548	
1982	115	207	122	7	11					4	49	8	522	
1983	285	291	115	12					12	16	117	52	900	
1984	136	20	127	35						4	32	13	367	
1985	13	247	49	60	0					39	27	50	484	
1986	87	146	7	54	13					12	32	76	426	
1987	140	70	100	0					3	29	219	79	639	
1988	162	234	101	14						58	21	163	752	
1989	110	103	78							10	39	140	478	
1990	152	95	57	88						7	72	33	504	
1991	157	92	193	7	3					2	16	4	473	
1992	197	335	63	1	15	10				10	64	334	1,029	
1993	183	163	46		37							132	158	720
1994	179	117	72	17	0					0	130	45	561	
1995	16	97	41	29					2	13	238	242	677	
1996	122	38	191	17						0	43	78	489	
1997	132	200	89	11	13					30	19	49	541	
1998	114	56	116	1	2					6	4	195	494	
1999	86	73	19							8	16	7	208	
2000	297	58	82							4	5	21	467	
2001	146	92	25	5	57					23	10	212	570	
2002	330	61								9	54	137	589	
2003										8	28	272	307	
2004														
2005														
2006														
Ave.	146	124	86	27	14				9	15	58	118	560	

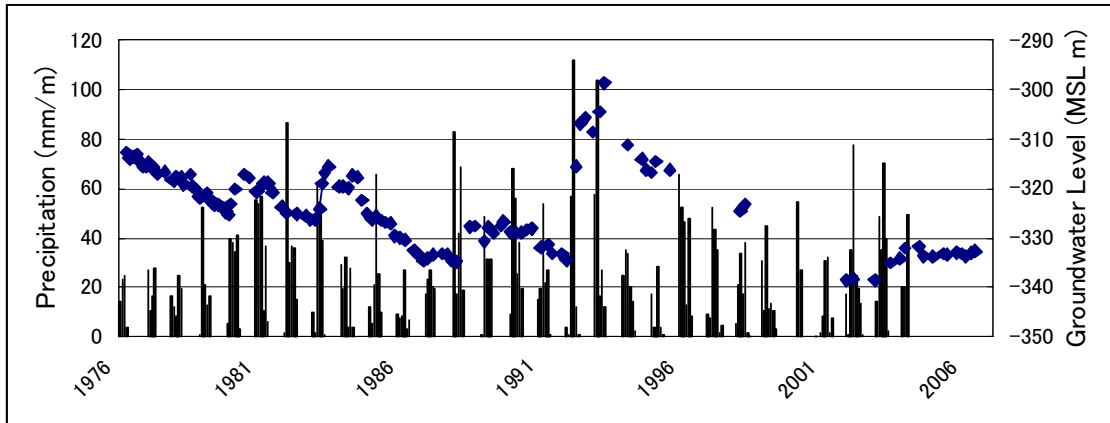


PMD_Code	9999999	X=	194.0
PN_Name_E	Jericho Meteorological Station	Y=	140.2
LOC_Name_E	Jericho (Ariha)	Z=	-260
GR_Governate_E	Jericho		

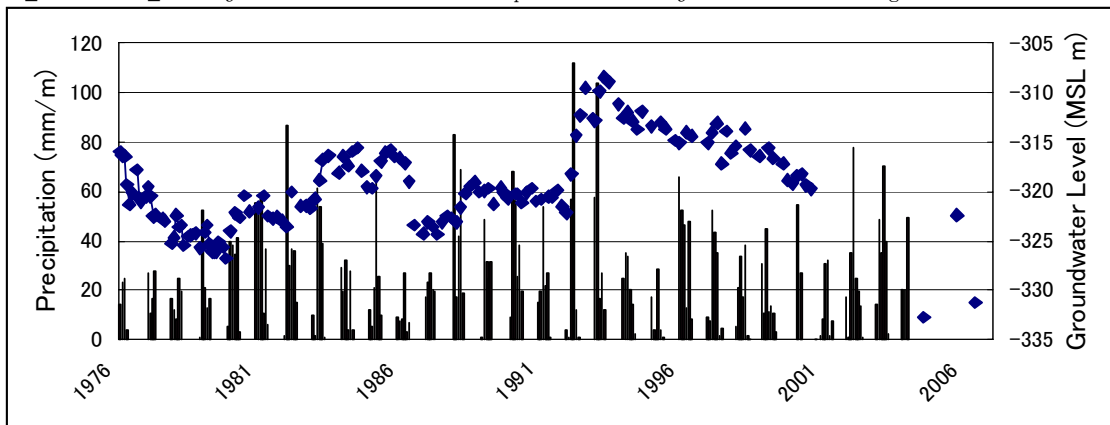
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1976	14	23	25	4									66	
1977	27	11	17	28							17	12	111	
1978	8	25	20								1	52	106	
1979	21	13	17								5	40	95	
1980	39	34	41	3							55	54	226	
1981	57	11	37	6							1	87	198	
1982	30	37	36	15						10		2	130	
1983	62	54	39	1							29	20	204	
1984	32	4	28	4							12	6	85	
1985	21	66	26	10							9	8	139	
1986	9	27	3	7							17	23	86	
1987	27	20	20								83	17	167	
1988	42	69	19								1	49	179	
1989	32	25	31								10	68	165	
1990	56	26	39	20							15	20	175	
1991	54	22	27	1							4	1	109	
1992	57	112	12	1							58	104	343	
1993	17	27	12								25	35	116	
1994	34	20	14	3							18	4	92	
1995	2	28	4	1							66	52	153	
1996	46	13	48	8							9	7	132	
1997	53	43	35	2	4						6	21	164	
1998	34	17	38	1	0								178	
1999	12	14	11	3						31	11	45	178	
2000	55		27						0		2	8	92	
2001	31	32	2	7								1	36	126
2002	78	25	20	14	1						18	1	36	126
2003	35	70	40	3							15	49	200	
2004										20	21	50	239	
2005														
2006														
Ave.	35	32	25	7	2				0	23	19	33	147	



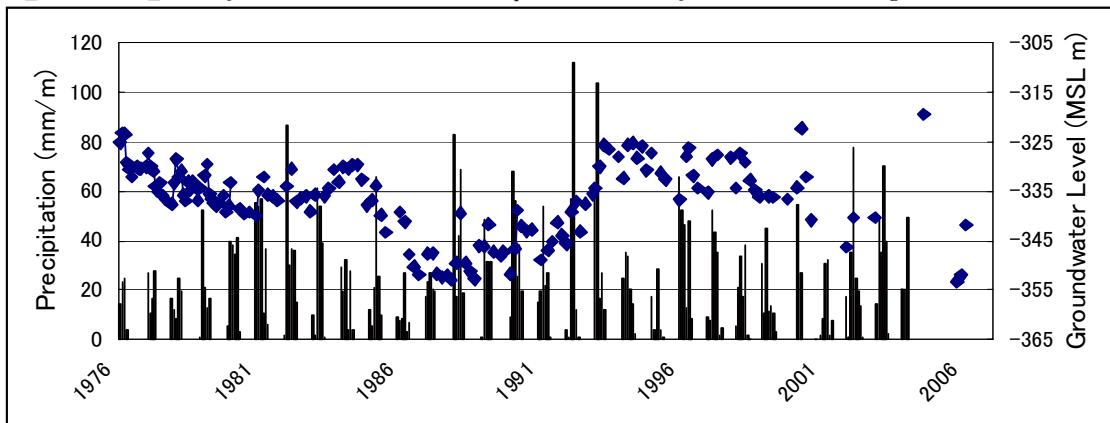
Annex 2.2
Groundwater Level



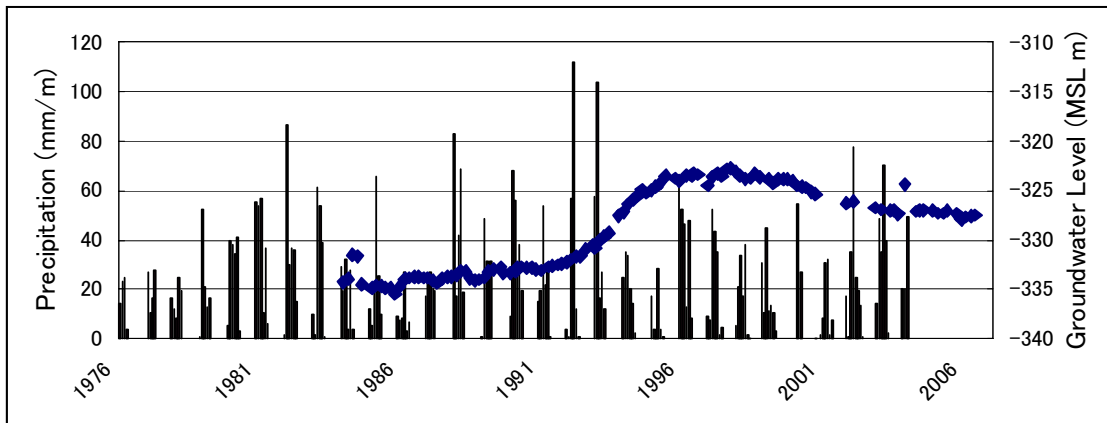
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GWA_Name_E	Alluvium	LOC_Name_E	Jericho (Ariha)
GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



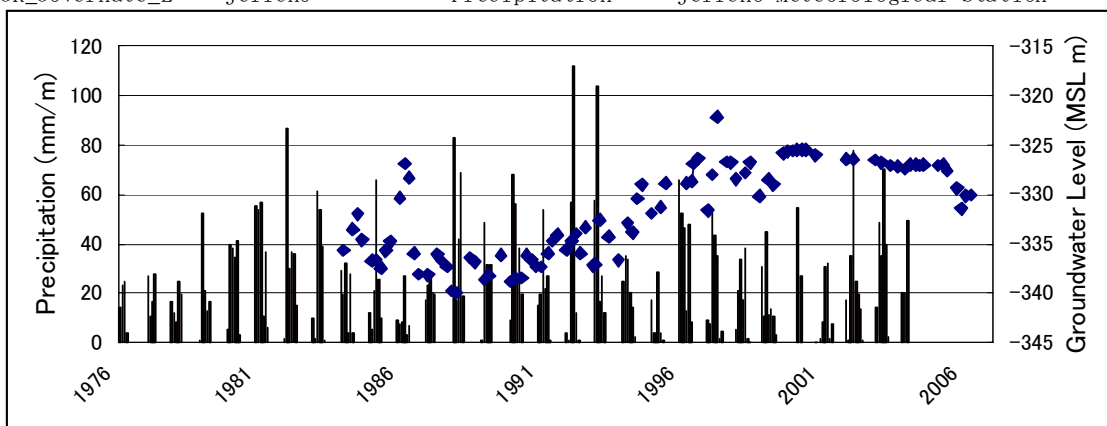
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GWA_Name_E	Alluvium	LOC_Name_E	Jericho (Ariha)
GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



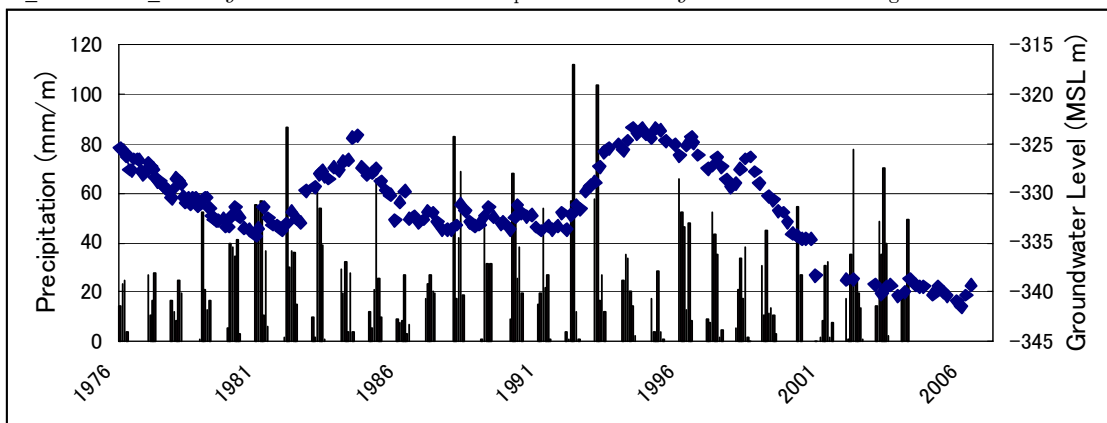
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GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



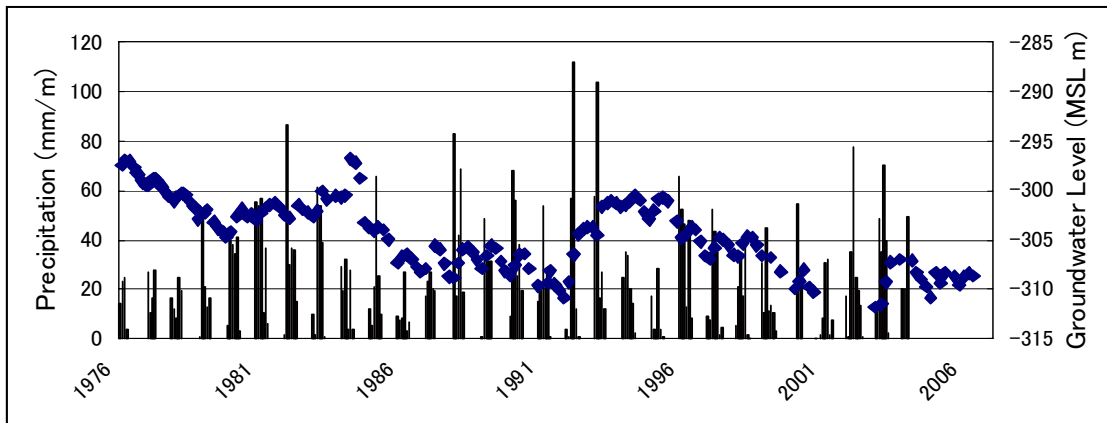
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GWA_Name_E	Alluvium	LOC_Name_E	Jericho (Ariha)
GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



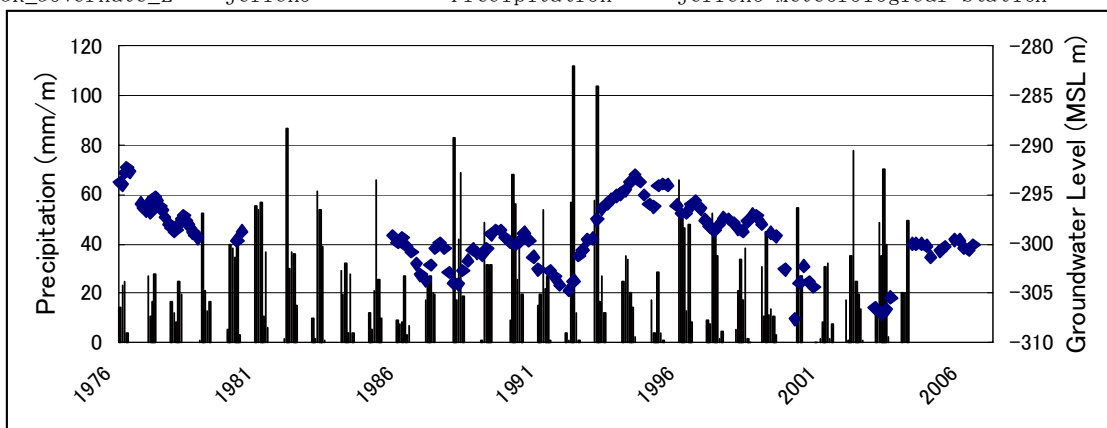
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GWA_Name_E	Alluvium	LOC_Name_E	Jericho (Ariha)
GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



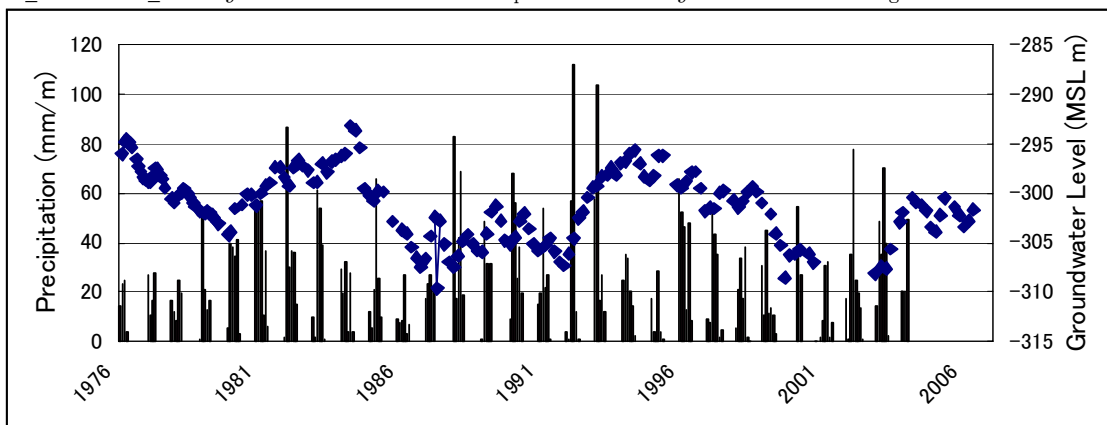
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GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



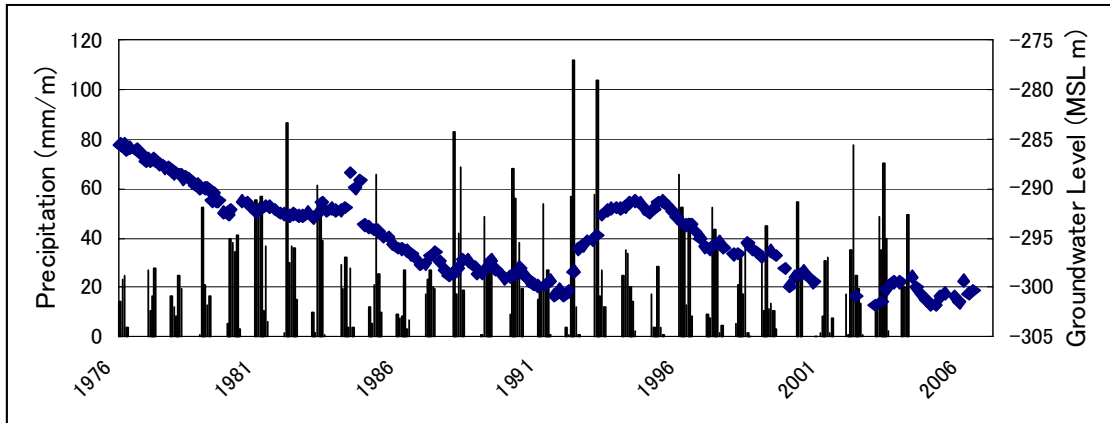
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GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



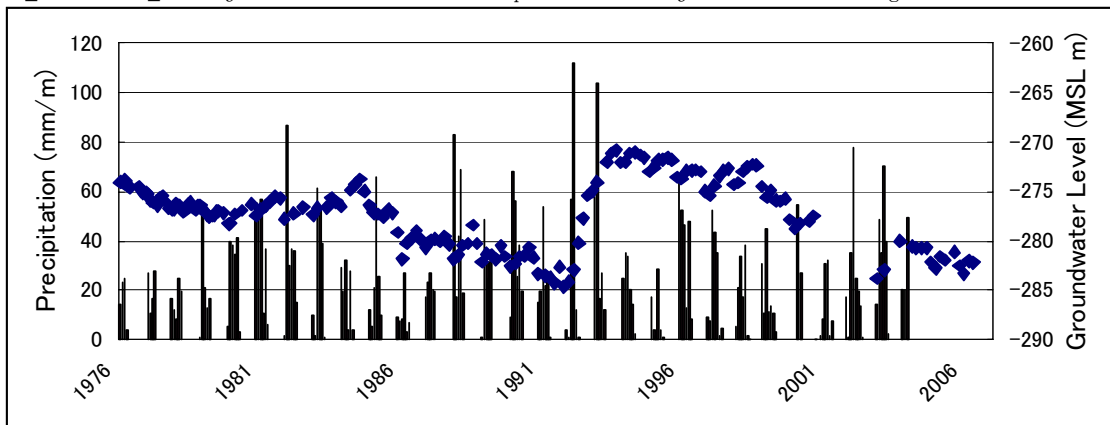
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GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



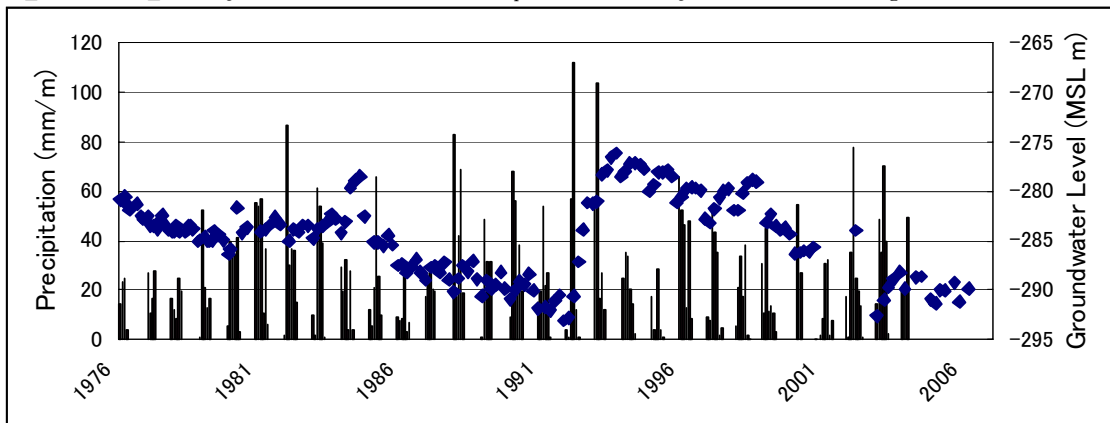
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GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



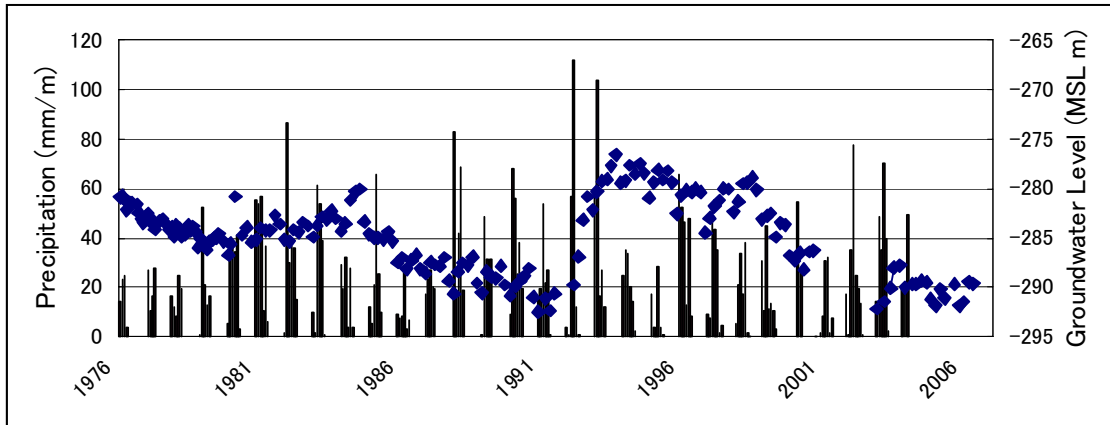
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GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



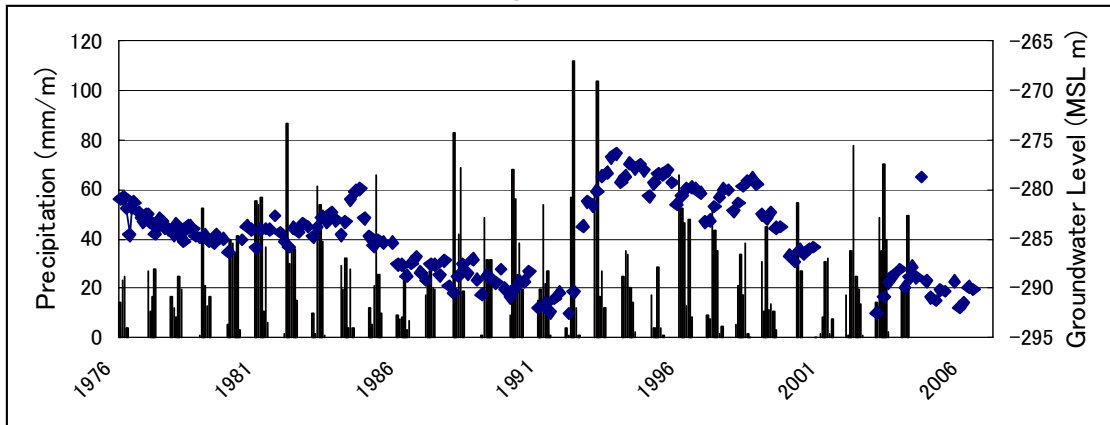
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GWA_Name_E	Alluvium	LOC_Name_E	Al Jiftlik
GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



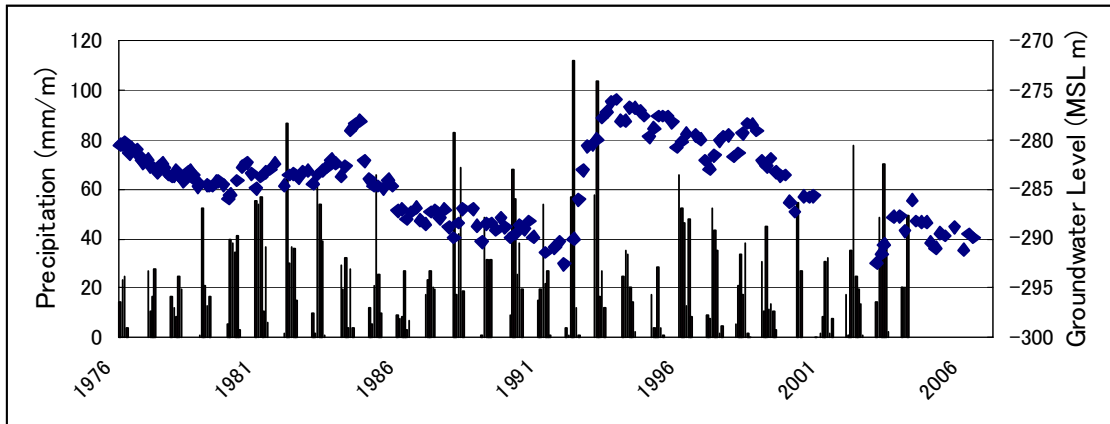
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GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



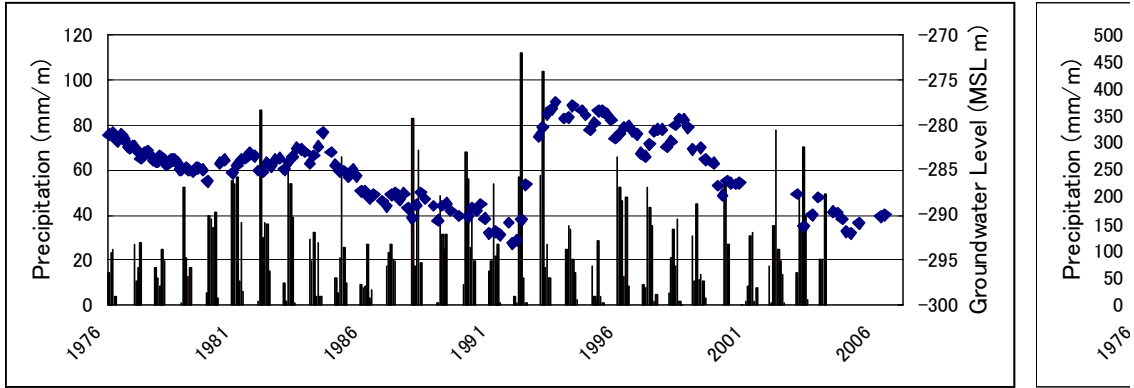
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GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



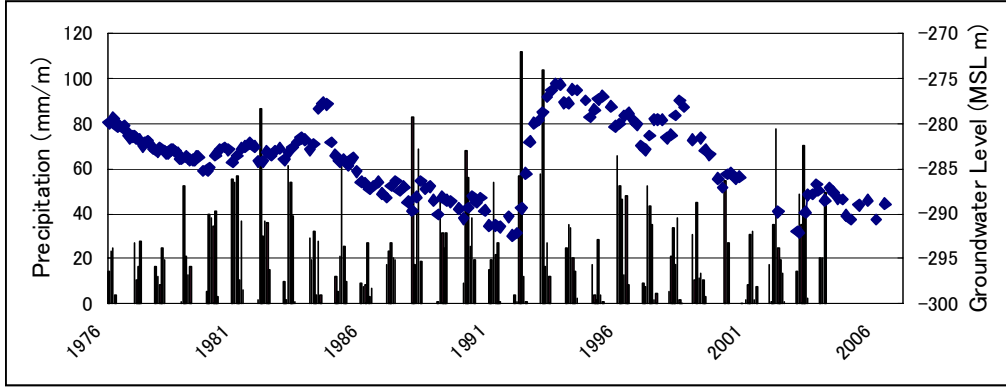
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GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



PMD_Code	W19-17/027	GWB_Name_E	Eastern
GWA_Name_E	Alluvium	LOC_Name_E	Al Jiftlik
GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station



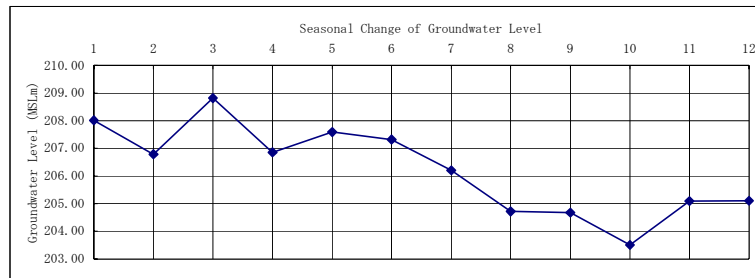
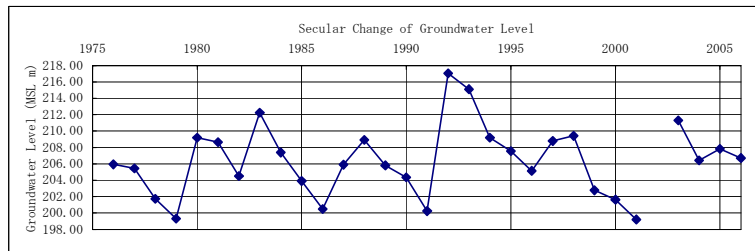
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GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station	GR_Govern



PMD_Code	W19-17/033	GWB_Name_E	Eastern
GWA_Name_E	Alluvium	LOC_Name_E	Al Jiftlik
GR_Governate_E	Jericho	Precipitation	Jericho Meteorological Station

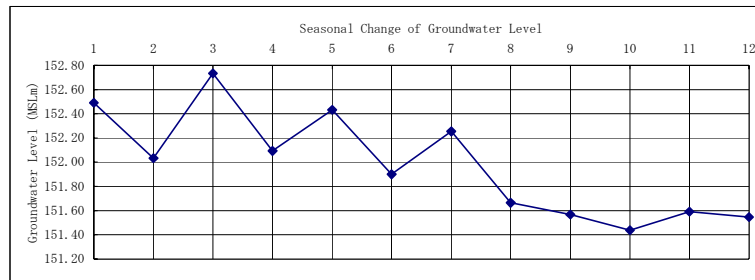
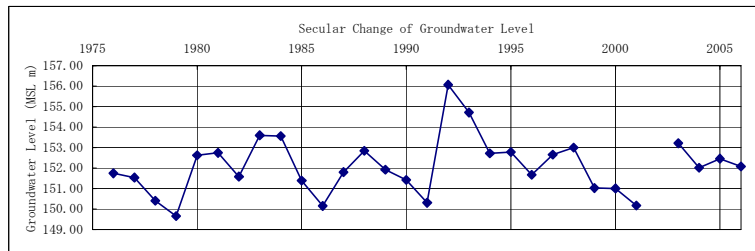
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 GWA_Name_E Eocene
 LOC_Name_E Ras Al-Far'a
 GR_Governate_E Nablus

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1976	206.78	206.49	206.93	207.04		206.10		205.64		204.74	204.48	205.25	205.94
1977	205.26	205.50	205.91	206.04	205.59					204.34			205.44
1978	204.83		204.17		201.54		201.19		200.08	200.17	200.26	201.64	201.73
1979	201.74			199.68	198.95		199.30	198.61	197.85	198.00	198.12	201.60	199.32
1980		206.10		212.03		211.14		209.45		208.48	208.02		209.20
1981	208.42		209.89			209.67	208.90		207.57		207.48		208.65
1982	206.85			205.83		204.06		203.23		202.96		204.10	204.51
1983			209.17	215.94		214.03		212.34		210.84		211.21	212.25
1984		210.33				208.59				205.07		205.54	207.38
1985		205.39		204.96		204.86		203.33		201.81		203.10	203.91
1986		203.10		201.07		200.74		198.11		197.73		202.22	200.50
1987		207.20		207.00		207.26		204.90		203.50		205.51	205.89
1988		206.74		210.89		210.69		208.69		207.60			208.92
1989	208.67	208.64		205.86		205.56		204.27		202.14		205.52	205.81
1990		206.73		205.97		205.15		203.32		201.69		203.29	204.36
1991			204.39		201.00		199.76		198.17		197.85		200.23
1992	213.67		220.00		220.00		218.23		215.63		214.71		217.04
1993	217.62		217.42		215.19				212.80		212.54		215.11
1994	213.09		212.03		208.73		207.89		206.22		207.21		209.19
1995			206.41		209.36		207.91		206.50		207.57		207.55
1996		208.46	207.53		205.59		204.00		202.39		202.90		205.14
1997	205.60		210.92		211.35		209.35		207.48		208.00		208.78
1998	209.32		209.42		211.35		209.55		207.45				209.42
1999	208.40		205.94		201.78				199.25		198.50		202.77
2000	202.52				203.55		201.30		199.19				201.64
2001			199.22										199.22
2002													
2003					212.00							210.60	211.30
2004	210.40						205.21				203.62		206.41
2005	206.45		211.75		207.90		208.12		204.89				207.82
2006	206.67											206.75	206.71
Ave.	208.02	206.79	208.82	206.86	207.59	207.32	206.21	204.72	204.68	203.51	205.09	205.10	206.41



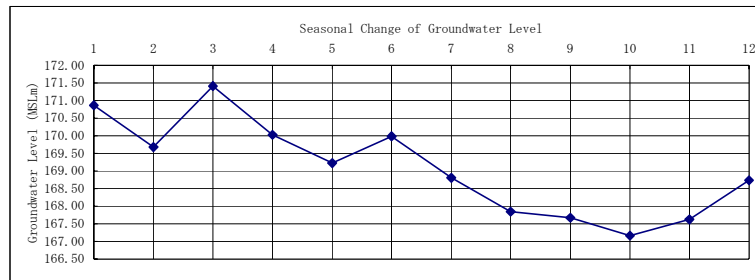
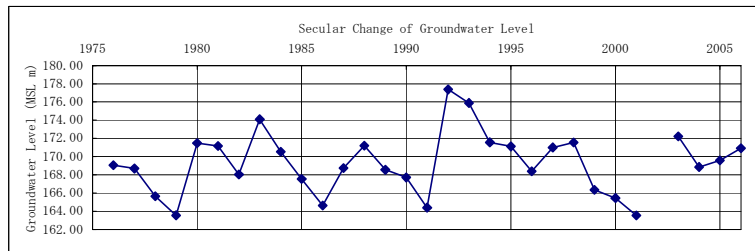
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 GWA_Name_E Eocene
 LOC_Name_E Ras Al-Far'a
 GR_Governate_E Tubas

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1976		151.82	152.08	152.12		152.04			151.54	151.50	151.32	151.49	151.74
1977	151.39	151.58	151.76	151.89	151.88					151.34	151.08	151.33	151.53
1978	151.33		151.10	150.85	150.67		150.22		149.87	149.84	149.66	150.05	150.40
1979	150.00		149.65	149.34	149.11							150.14	149.65
1980		151.63		153.61									152.62
1981	152.61		153.06			153.07					152.22		152.74
1982	151.99			151.75		151.44		151.14				151.58	151.58
1983								153.82		153.38		153.59	153.60
1984		153.33		155.60						151.73			153.55
1985				151.76		151.62						150.78	151.39
1986		150.70		150.36		150.00		149.52					150.15
1987				152.28		152.42		151.47		151.12		151.70	151.80
1988			152.08	153.69		153.23		152.76		152.43			152.84
1989	152.72	152.66		151.99		152.03		151.47		150.87		151.70	151.92
1990		152.06		151.97		151.25		151.47		150.73		151.03	151.42
1991			151.29		150.74		150.30		149.69		149.48		150.30
1992	154.10		159.30		157.61		156.24		154.69		154.42		156.06
1993	155.78		155.71		154.66				153.66		153.72		154.71
1994	153.76		153.43		152.50		152.52		151.90		152.19		152.72
1995	153.16		153.14		152.91		152.53				152.12		152.77
1996		152.44		152.28		151.95		151.40		150.90		151.04	151.67
1997	151.53		153.26		153.23		152.99		152.29		152.58		152.65
1998	152.88		152.91		153.57		153.06		152.53				152.99
1999	152.64		151.91		150.93				150.01		149.60		151.02
2000	150.47		151.99		151.38		150.99		150.17				151.00
2001			150.17										150.17
2002													
2003					153.35							153.06	153.21
2004	153.10				151.75		151.90				151.30		152.01
2005	152.83		153.45		152.70		152.65		151.55		151.55		152.45
2006	152.05											152.10	152.07
Ave.	152.49	152.03	152.73	152.09	152.43	151.90	152.25	151.66	151.57	151.44	151.59	151.55	152.09



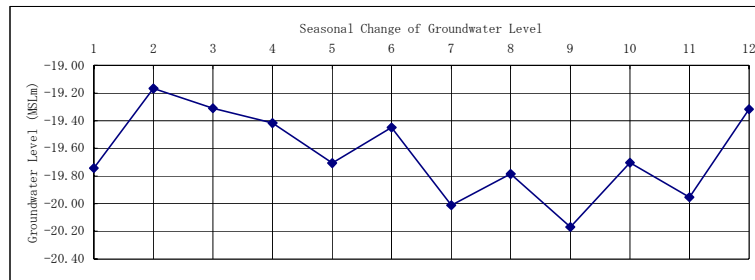
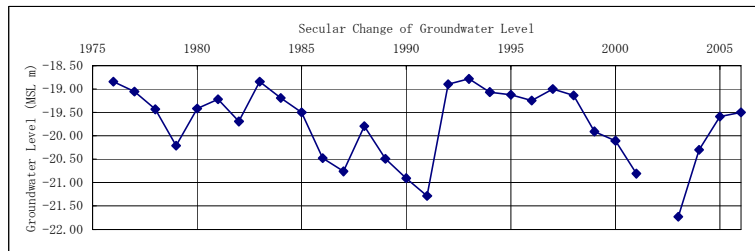
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 GWA_Name_E Eocene
 LOC_Name_E Ras Al-Far'a
 GR_Governate_E Tubas

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1976	169.86	169.65	170.00	169.57	169.04	169.07				167.98	167.76	168.60	169.06
1977	168.70	168.90	169.19	169.33						167.73		168.28	168.69
1978	168.36		167.80		166.50		165.25	164.33	164.27	164.21	164.49		165.65
1979	165.85			164.00	163.25		163.44	162.89	162.19	162.29	162.41	165.63	163.55
1980		168.70		173.73		173.02		171.70		171.04	170.66		171.47
1981	171.21					171.98			170.32				171.17
1982	169.94			168.97		167.70		166.98		166.71		167.90	168.03
1983			171.73	176.80		175.15		174.00		172.81			174.10
1984		172.68		172.05		171.05				168.18		168.72	170.54
1985		168.81		168.38		168.03		166.90		165.64			167.55
1986		167.06		165.31		164.74		162.65		161.95		166.11	164.64
1987		170.13		169.65		169.68		167.69		166.63		168.70	168.75
1988		169.80		172.81		172.36		171.08		169.95			171.20
1989	171.39			169.05		168.73		167.55		165.83		168.75	168.55
1990		169.90		168.91		168.34		167.07		165.41		166.57	167.70
1991			167.92		164.80		164.15		162.74		162.34		164.39
1992	175.00		180.00		179.45		178.14		176.11		175.49		177.37
1993	177.79		177.58						174.17		173.99		175.88
1994	174.69		173.82		171.40		170.49		169.13		169.85		171.56
1995	172.83		172.39		171.54		170.61		169.20		170.10		171.11
1996		171.15	170.25		168.63		168.33		165.82		166.17		168.39
1997	168.76		173.02		173.00		171.42		169.63		170.18		171.00
1998	171.78		171.63		173.10		171.59		169.63				171.55
1999	170.95		168.91		165.60				163.54		162.79		166.36
2000	166.20				166.72		165.33		163.54				165.45
2001			163.54										163.54
2002													
2003					172.08							172.35	172.22
2004	172.78				164.05		166.55	171.31		171.00	164.61	171.65	168.85
2005	169.59		173.45		169.20		170.35		167.07		165.88	171.55	169.58
2006	169.96			171.88									170.92
Ave.	170.87	169.68	171.42	170.03	169.22	169.99	168.80	167.85	167.67	167.16	167.62	168.73	169.29



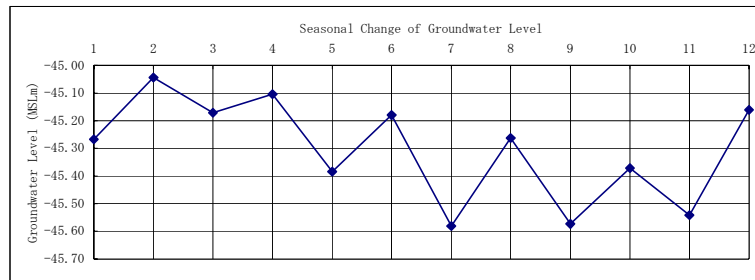
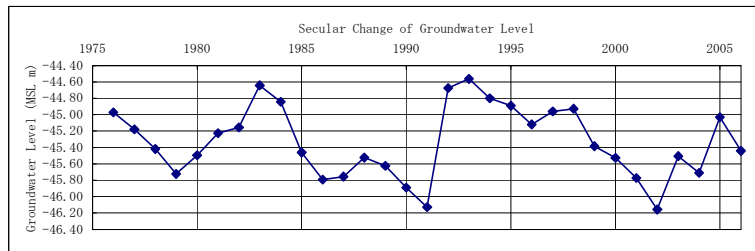
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 GWA_Name_E Neogene
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 GR_Governate_E Nablus

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1976	-18.78	-18.67	-18.57	-18.72	-18.82	-18.86		-19.05		-19.03	-19.04	-18.92	-18.85
1977	-18.88	-18.84	-18.48		-19.00	-19.10	-19.19		-19.26	-19.28	-19.28	-19.26	-19.06
1978	-18.84	-18.84		-19.15	-19.32		-19.44	-19.75	-19.88	-19.86	-19.83		-19.43
1979	-19.70	-19.82	-19.77	-19.91	-19.98	-20.44	-20.57		-20.82		-20.90		-20.21
1980	-19.88		-19.52		-19.29		-19.06		-19.52		-19.25		-19.42
1981	-19.30		-19.10		-19.12		-19.35		-19.56		-18.90		-19.22
1982			-19.02		-19.63		-19.90		-20.11		-19.82		-19.70
1983	-19.49		-18.81		-18.52		-18.61		-18.85		-18.79		-18.85
1984			-18.77		-19.00		-19.27		-19.52		-19.40		-19.19
1985			-18.48		-19.63		-19.82		-20.07				-19.50
1986	-19.73		-20.04		-20.30		-20.86		-21.57		-20.38		-20.48
1987	-20.07				-20.73		-20.84		-21.47		-20.70		-20.76
1988			-19.53		-19.94			-19.96	-20.34		-19.20		-19.79
1989		-19.67	-19.69		-20.90		-20.79			-21.48	-20.42		-20.49
1990	-19.92		-20.02		-21.42		-21.41		-21.76				-20.91
1991		-20.24		-21.04			-21.92	-21.94					-21.29
1992	-19.07	-18.74		-18.90		-18.79		-18.91		-18.97			-18.90
1993	-18.70	-18.83		-18.70				-18.91					-18.79
1994			-19.02	-19.06		-19.11		-19.18				-18.97	-19.07
1995		-19.13		-19.06			-19.14	-19.20		-19.19		-19.03	-19.13
1996		-19.14		-19.05		-19.26		-19.47		-19.60		-18.96	-19.25
1997		-18.83		-19.11		-19.00		-19.05				-19.02	-19.00
1998		-19.06		-18.98		-18.90				-19.57		-19.18	-19.14
1999		-19.10		-19.60		-20.15		-20.50				-20.19	-19.91
2000		-19.43		-20.00		-20.18		-20.81					-20.11
2001			-20.81										-20.81
2002													
2003	-24.30					-19.54			-19.64		-23.44		-21.73
2004				-20.30		-20.05		-20.48		-20.35		-20.32	-20.30
2005				-19.59									-19.59
2006				-19.50									-19.50
Ave.	-19.74	-19.17	-19.31	-19.42	-19.71	-19.45	-20.01	-19.79	-20.17	-19.70	-19.95	-19.32	-19.74



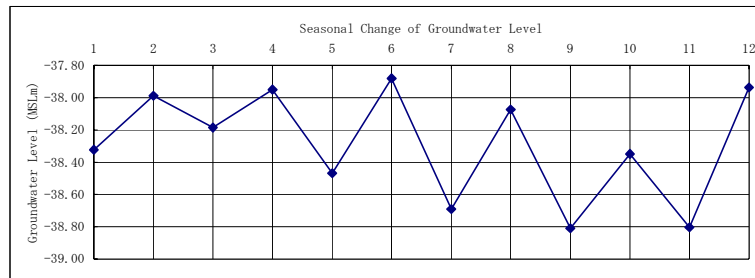
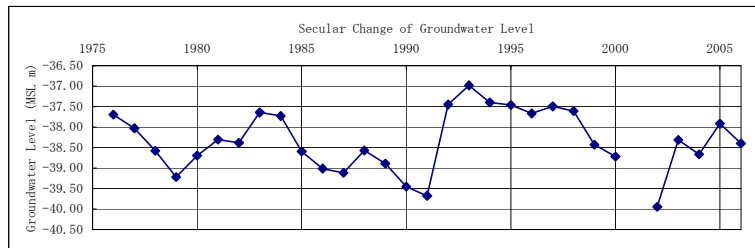
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 LOC_Name_E Wadi Al Far'a
 GR_Governate_E Nablus

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1976	-44.86	-44.78	-44.78	-44.82	-44.96	-44.96		-45.14		-45.16	-45.13	-45.10	-44.97
1977	-44.99	-44.96	-44.70		-45.21	-45.23	-45.38		-45.32	-45.33	-45.32	-45.33	-45.18
1978		-44.93	-44.99	-45.31	-45.31		-45.51	-45.68	-45.71	-45.68	-45.63		-45.42
1979	-45.41	-45.45	-45.56	-45.66	-45.79	-45.84	-45.86		-45.96		-45.96		-45.72
1980	-45.72		-45.38		-45.24		-46.11		-45.39		-45.12		-45.50
1981	-45.17		-45.11		-45.09		-45.28		-45.45		-45.25		-45.23
1982	-45.09		-45.09		-45.52		-45.64		-44.89		-44.69		-45.16
1983	-44.50		-44.20		-44.79		-44.80		-44.91				-44.64
1984	-44.91				-44.21		-44.46		-45.36		-45.27		-44.84
1985	-45.26		-45.07		-45.45		-45.60		-45.68		-45.70		-45.46
1986	-45.43		-45.69		-45.80		-45.94		-46.09		-45.80		-45.79
1987	-45.69		-45.22		-45.90		-45.92		-45.99		-45.80		-45.76
1988	-46.03		-45.39		-45.50			-45.56	-45.62			-45.03	-45.52
1989		-45.18	-45.20		-45.82		-45.88			-45.98	-45.67		-45.62
1990	-45.49		-45.56		-46.14		-46.02		-46.12		-46.00		-45.89
1991		-45.67		-45.84			-46.40	-46.37		-46.35			-46.13
1992	-45.16	-44.35		-44.74		-44.70		-44.65		-44.43			-44.67
1993		-44.53		-44.57		-44.49		-44.68				-44.54	-44.56
1994			-44.67	-44.84		-44.92		-44.89		-44.93		-44.54	-44.80
1995		-44.91		-44.72			-44.88	-44.95		-44.97		-44.91	-44.89
1996		-44.88		-44.80		-45.23		-45.34		-45.36		-45.09	-45.12
1997		-45.23		-44.95		-44.87		-44.88		-44.93		-44.89	-44.96
1998		-44.99		-44.84		-44.92		-44.95					-44.93
1999		-45.02		-45.28		-45.40		-45.48		-45.66		-45.45	-45.38
2000		-45.25		-45.55		-45.53		-45.77					-45.53
2001			-45.77										-45.77
2002												-46.22	-46.09
2003			-45.49			-45.51			-45.51				-45.51
2004				-45.93		-45.71				-45.65		-45.54	-45.71
2005				-44.39				-45.31				-45.39	-45.03
2006		-45.49		-45.39									-45.44
Ave.	-45.27	-45.04	-45.17	-45.10	-45.38	-45.18	-45.58	-45.26	-45.57	-45.37	-45.54	-45.16	-45.33



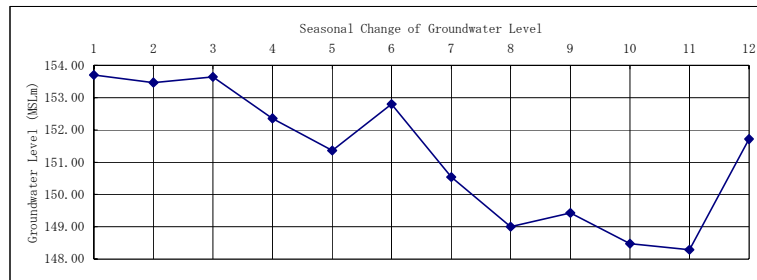
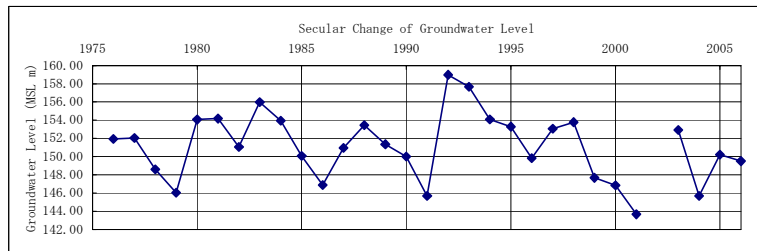
PMD_Code W18-18/014
 GWB_Name_E Eastern
 GWA_Name_E Neogene
 LOC_Name_E Wadi Al Far'a
 GR_Governate_E Tubas

	1	2	3	4	5	6	7	8	9	10	11	12	Ave.
1976	-37.51	-37.30	-37.38	-37.59	-37.65	-37.67		-37.90		-38.05	-38.00	-37.91	-37.70
1977	-37.74	-37.69	-37.44		-37.85	-38.02	-38.21		-38.28	-38.32	-38.34	-38.41	-38.03
1978	-37.91		-38.10	-38.12	-38.35		-38.67	-38.94	-39.04	-39.06	-39.03		-38.58
1979	-38.84	-38.85	-38.92	-39.07	-39.25	-39.35	-39.42		-39.60		-39.69		-39.22
1980	-39.29		-38.95		-38.55		-38.12		-38.58				-38.70
1981	-38.41		-38.20		-38.08		-38.33		-38.64		-38.19		-38.31
1982	-38.08		-38.00		-38.71		-38.98		-38.37		-38.16		-38.38
1983	-37.82		-37.38		-37.68		-37.61		-37.75				-37.65
1984	-37.53		-37.11		-37.22		-37.59		-38.51		-38.44		-37.73
1985	-38.55		-37.98		-38.67		-38.96		-38.79		-38.83		-38.60
1986	-38.39		-38.63		-38.98		-39.32		-39.59		-39.19		-39.02
1987	-39.05		-38.69		-39.14		-39.23		-39.44		-39.18		-39.12
1988	-39.05		-38.42		-38.55			-38.54	-38.79			-38.08	-38.57
1989		-38.38	-38.29		-39.09		-39.19			-39.40	-39.01		-38.89
1990			-39.01		-39.51		-39.49		-39.69		-39.59		-39.46
1991		-39.05		-39.30			-39.91	-40.02		-40.12			-39.68
1992	-38.35	-37.51		-37.42		-37.29		-37.11		-37.03			-37.45
1993				-37.33		-36.79		-36.86				-36.96	-36.99
1994				-37.32		-37.41		-37.48		-37.63		-37.17	-37.40
1995		-37.52		-37.29			-37.34	-37.55		-37.60		-37.50	-37.47
1996		-37.43		-37.35		-37.69		-37.92		-38.00		-37.62	-37.67
1997			-37.60		-37.40		-37.42		-37.52		-37.55		-37.50
1998		-37.62		-37.60		-37.55		-37.59		-37.76		-37.55	-37.61
1999		-37.77		-38.10		-38.49		-38.60		-39.04		-38.60	-38.43
2000		-38.33		-38.80				-39.03					-38.72
2001													
2002												-39.95	-39.95
2003			-38.47		-38.21	-38.33				-38.25			-38.32
2004				-38.43		-38.57				-39.00			-38.67
2005				-37.92									-37.92
2006		-38.40											-38.40
Ave.	-38.32	-37.99	-38.19	-37.95	-38.47	-37.88	-38.69	-38.07	-38.81	-38.35	-38.80	-37.94	-38.34



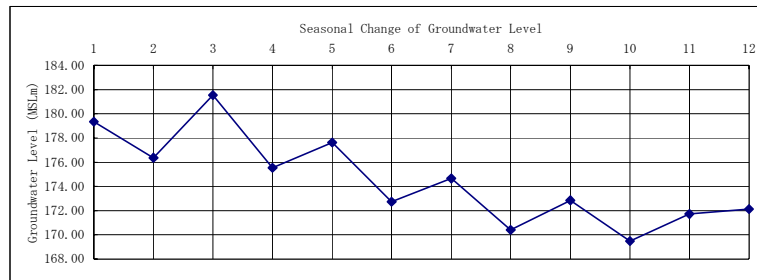
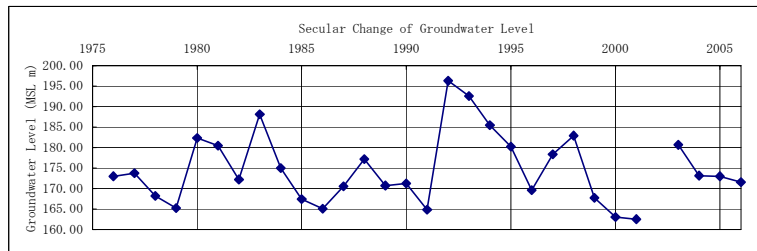
PMD_Code W18-18/016
 GWB_Name_E North Eastern
 GWA_Name_E Eocene
 LOC_Name_E Ras Al-Far'a
 GR_Governate_E Tubas

	1	2	3	4	5	6	7	8	9	10	11	12	Ave.
1976	153.49	153.33	153.40	152.49	151.41	151.43		151.28	150.39		150.05	152.17	151.94
1977	152.59		152.80	152.44	151.52					150.66		152.24	152.04
1978	152.48		152.67		148.04		147.50	146.41		145.59	146.84	149.32	148.61
1979	150.01		148.20	146.50	144.96			144.50	143.54	143.74	143.87	148.97	146.03
1980		152.31		155.58		155.14				153.73	153.47		154.06
1981	154.68		155.02			154.09	153.98			153.12			154.18
1982	153.45			152.14		150.39		149.48		148.79		152.07	151.05
1983			153.54		158.45	157.07				154.90		155.98	155.99
1984		155.71		156.25		155.17				150.39		152.11	153.93
1985		152.76		150.80		150.44		149.03		147.11		150.35	150.08
1986		151.17		147.84				143.32		141.88		150.11	146.86
1987		153.42		151.63		151.39		149.53		147.59		152.09	150.94
1988		153.33		154.56		154.41		153.08		151.92			153.46
1989	154.69	154.67		151.38		150.79		149.44		147.16			151.36
1990		153.36		150.64		150.47		148.79		146.71			149.99
1991			151.78		145.78		145.02		143.33		142.42		145.67
1992	156.91		161.57		160.35		159.52		158.02		157.52		158.98
1993	159.29		159.22		157.77				156.02		155.97		157.65
1994	157.32		156.28		153.59		152.83		151.70		152.70		154.07
1995	155.88		154.47		153.55		152.28		151.11		152.44		153.29
1996		154.67	153.30		150.85		148.31		145.40		146.40		149.82
1997	152.05		155.58		154.80		153.02		150.95		151.92		153.05
1998	155.06		154.31		154.80		153.36		151.35				153.78
1999	154.12		151.06		146.47				143.94		142.76		147.67
2000	145.88				152.14		145.70		143.66				146.85
2001			143.66										143.66
2002													
2003					152.38							153.47	152.93
2004	156.20				145.10		143.05				138.36		145.68
2005	153.11		155.14		149.63		151.88				141.25		150.20
2006	149.50												149.50
Ave.	153.71	153.47	153.65	152.36	151.36	152.80	150.54	149.00	149.43	148.47	148.28	151.72	151.11



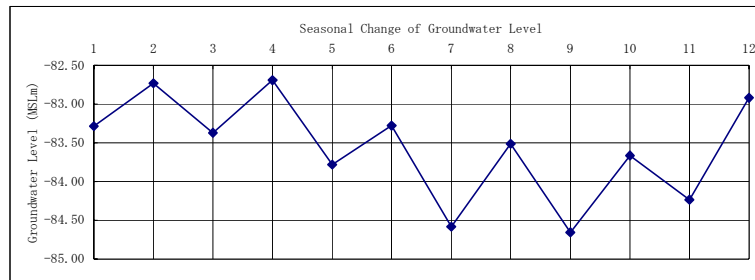
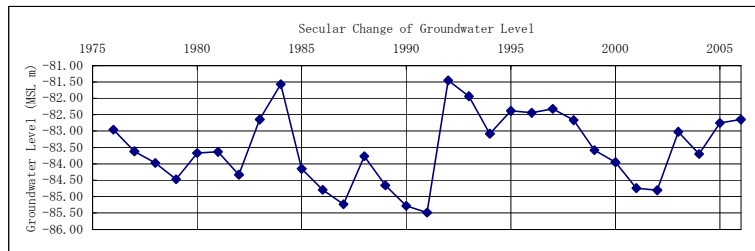
PMD_Code W18-18/017
 GWB_Name_E North Eastern
 GWA_Name_E Eocene
 LOC_Name_E Ras Al-Far'a
 GR_Governate_E Tubas

	1	2	3	4	5	6	7	8	9	10	11	12	Ave.
1976	179.36	178.42		176.79	172.80	174.51		168.57	168.56	167.25	170.22	173.30	172.98
1977	175.44			173.97	172.82					172.25	174.11		173.72
1978			174.10		169.89		171.97	166.88	163.85	164.06	166.57		168.19
1979	170.34		169.58	164.89	162.22		161.60	161.83		162.90	163.13	170.19	165.19
1980				185.43		185.58		182.29		179.81	178.43		182.31
1981	181.03		183.22			181.98	179.24		176.80				180.45
1982	179.51			176.73		168.43		168.06		168.26			172.20
1983				190.91				187.67		185.70			188.09
1984		185.26						171.55		169.38		173.70	174.97
1985				169.29		164.93		166.50		162.43		173.88	167.41
1986		169.04		165.14		162.63		160.84				167.68	165.07
1987		174.60		173.47		168.58				165.14		170.97	170.55
1988				183.97		179.57		174.31		170.73			177.15
1989	179.82			172.38		167.53		166.10		167.25		171.13	170.70
1990		174.55		173.36		173.61		170.30		167.97		167.64	171.24
1991			172.74		166.72		161.56		161.60		161.49		164.82
1992	187.39		206.91		202.07		196.69		193.32		191.18		196.26
1993	195.41		195.34		192.14				190.03		189.76		192.54
1994	190.10		189.16		185.32		183.69				178.92		185.44
1995					184.83		180.46		177.94		177.67		180.23
1996					176.10		169.38		166.72		166.15		169.59
1997	172.90		184.75		186.46		181.92		177.49		166.40		178.32
1998	182.98		183.90		186.51		182.92		178.21				182.90
1999	178.63		174.85		161.98				162.24		160.84		167.71
2000	163.73				162.45		163.45		162.50				163.03
2001			162.50										162.50
2002													
2003												180.65	180.65
2004	183.85				177.00		162.20				169.44		173.12
2005	177.52				182.75		175.38		167.80		161.40		172.97
2006	171.55												171.55
Ave.	179.35	176.37	181.55	175.53	177.63	172.73	174.65	170.41	172.85	169.47	171.71	172.13	174.73



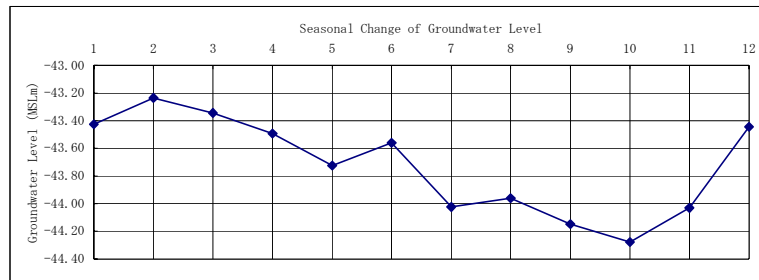
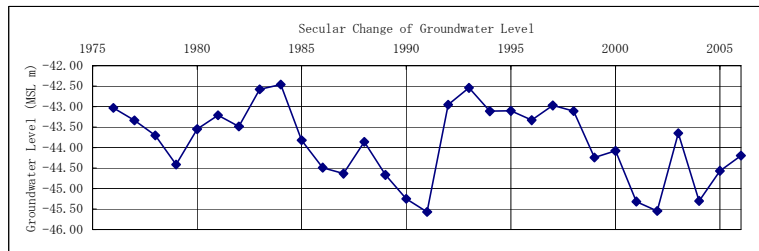
PMD_Code W18-18/019A
 GWB_Name_E Eastern
 GWA_Name_E Neogene
 LOC_Name_E Wadi Al Far'a
 GR_Governate_E Nablus

	1	2	3	4	5	6	7	8	9	10	11	12	Ave.
1976	-82.62	-82.73	-82.41	-82.24	-82.84	-83.08		-83.53		-83.55	-83.36	-83.21	-82.96
1977	-82.88	-83.27	-83.15		-83.34	-83.85	-84.00		-84.17	-83.99	-83.91		-83.62
1978	-82.95	-83.08	-83.03				-84.33	-84.73	-84.58	-84.64	-84.42		-83.97
1979	-83.68	-83.99	-83.38	-84.38	-84.59	-84.79	-85.17		-85.17		-85.09		-84.47
1980	-83.71		-83.14		-83.50			-83.88		-84.19		-83.61	-83.67
1981	-83.29		-83.27		-83.97				-84.34		-83.30		-83.63
1982			-84.14		-84.26		-84.93		-85.07		-83.25		-84.33
1983			-81.57		-82.82		-83.05		-83.30		-82.50		-82.65
1984	-82.42				-79.69		-80.15		-84.03				-81.57
1985	-83.25		-83.30		-84.04		-84.72		-84.89		-84.71		-84.15
1986	-83.87		-84.18		-85.00		-85.55		-85.75		-84.39		-84.79
1987	-84.25		-84.16		-85.88		-85.86		-85.75		-85.50		-85.23
1988	-84.27		-82.64		-83.36			-84.08	-84.67			-83.58	-83.77
1989		-83.30	-83.36		-85.14		-85.66			-85.75	-84.73		-84.66
1990	-84.19		-84.40		-85.31		-86.12		-86.04		-85.62		-85.28
1991		-84.16		-84.92			-86.16	-86.18		-86.00			-85.48
1992	-81.33	-79.58		-80.73		-81.66		-82.66		-82.74			-81.45
1993				-81.09		-82.35		-82.29		-82.27		-81.68	-81.94
1994				-82.83		-83.35		-83.07		-83.07			-83.08
1995		-82.75		-82.28		-82.81		-82.44		-82.46		-81.58	-82.39
1996		-82.64		-81.88		-82.68				-82.87		-82.15	-82.44
1997		-81.14		-82.24		-82.80		-82.84		-82.61		-82.29	-82.32
1998		-82.79		-82.38		-82.75		-82.75					-82.67
1999		-82.65		-83.38		-84.18				-84.23		-83.47	-83.58
2000		-82.98		-83.45		-84.62		-84.74					-83.95
2001			-84.74										-84.74
2002												-84.89	-84.72
2003			-83.04		-82.98	-83.12			-83.24				-83.02
2004				-83.60		-83.86		-84.05		-83.44		-83.55	-83.70
2005				-82.80				-82.30				-83.15	-82.75
2006		-83.15		-82.15									-82.65
Ave.	-83.29	-82.73	-83.37	-82.69	-83.78	-83.28	-84.58	-83.51	-84.66	-83.66	-84.23	-82.92	-83.54



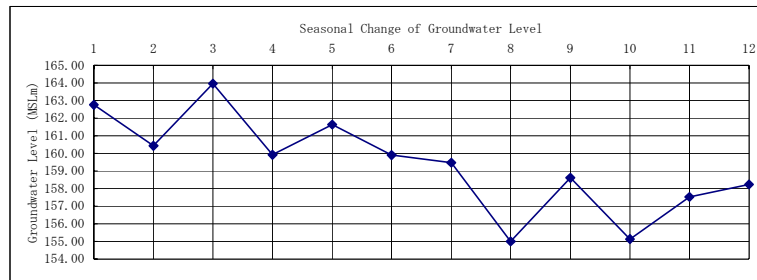
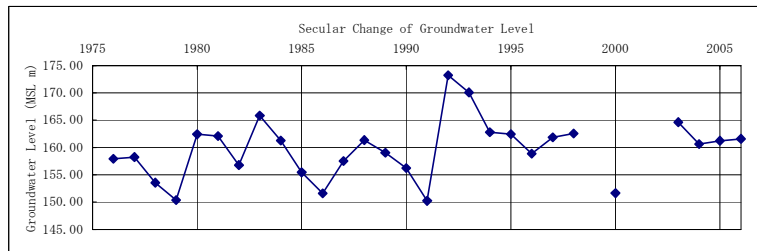
PMD_Code W18-18/023
 GWB_Name_E Eastern
 GWA_Name_E Neogene
 LOC_Name_E Wadi Al Far'a
 GR_Governate_E Nablus

	1	2	3	4	5	6	7	8	9	10	11	12	Ave.
1976	-42.90	-42.90	-42.80	-42.83	-42.98	-43.03		-43.50		-43.27		-43.09	-43.03
1977	-42.91	-43.07	-42.70		-43.26	-43.39	-43.74		-43.65	-43.60	-43.61	-43.47	-43.34
1978	-43.05	-43.12	-43.08	-43.40	-43.60		-43.80	-44.13	-44.26	-44.32	-44.29		-43.70
1979	-43.98	-44.09	-44.13	-44.29	-44.29	-44.57	-44.68		-44.86		-44.88		-44.42
1980	-44.22				-43.11		-43.33		-43.70		-43.40		-43.55
1981	-43.40		-43.24		-43.28		-43.54		-42.73		-43.09		-43.21
1982	-43.32		-43.13		-43.79		-44.06		-43.48		-43.15		-43.49
1983	-42.83		-42.10		-42.57		-42.59		-42.83		-42.57		-42.58
1984	-42.55		-41.35		-41.58		-42.11		-43.67		-43.52		-42.46
1985	-43.54		-43.10		-43.79		-43.96		-44.20		-44.37		-43.83
1986	-43.80		-44.16		-44.37		-44.79		-45.49		-44.34		-44.49
1987	-44.15		-44.01		-44.96		-44.77		-45.35		-44.60		-44.64
1988	-44.37		-43.53		-43.97			-43.91	-44.32			-43.08	-43.86
1989		-43.44	-44.71		-44.97		-44.77			-45.51	-44.63		-44.67
1990	-44.08				-45.33		-45.36		-45.71		-45.78		-45.25
1991		-44.49		-44.86			-45.86	-45.88		-46.78			-45.57
1992	-43.20	-43.18		-42.93		-42.76		-42.82		-42.85			-42.96
1993	-42.50	-42.61		-42.60		-42.88		-42.74				-41.95	-42.55
1994			-42.79	-43.03		-43.15		-43.28		-43.62		-42.83	-43.12
1995		-43.12		-42.91			-43.00	-43.32		-43.24		-43.06	-43.11
1996		-43.19		-43.11		-43.34		-43.63		-43.78		-42.96	-43.33
1997		-42.54		-43.04		-42.97		-42.97		-43.45		-42.88	-42.98
1998		-43.00		-43.03		-43.03		-43.53				-42.97	-43.11
1999		-43.10		-43.68		-44.33		-44.55		-45.34		-44.47	-44.25
2000		-43.44		-42.98		-44.59		-45.32					-44.08
2001			-45.32										-45.32
2002												-45.55	-45.55
2003				-43.35		-43.21			-43.83		-44.21		-43.65
2004				-45.63		-45.04		-45.26		-45.57		-45.02	-45.30
2005								-44.57					-44.57
2006				-44.20									-44.20
Ave.	-43.43	-43.23	-43.34	-43.49	-43.72	-43.56	-44.02	-43.96	-44.15	-44.28	-44.03	-43.44	-43.88



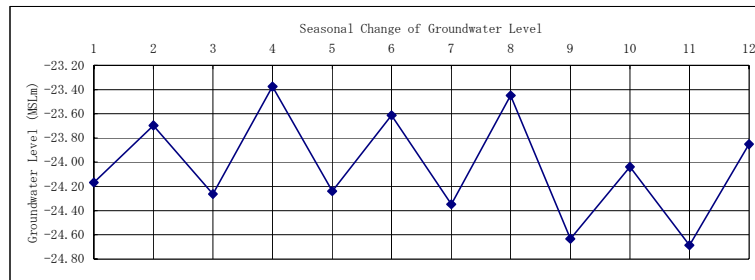
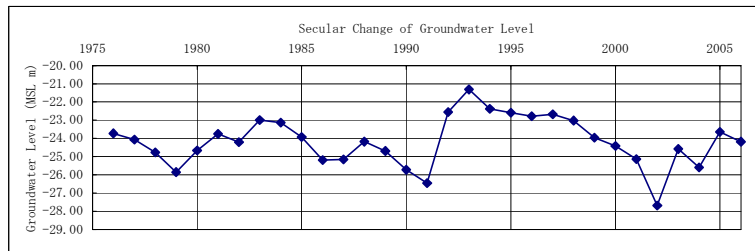
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 GWB_Name_E North Eastern
 GWA_Name_E Eocene
 LOC_Name_E Ras Al-Far'a
 GR_Governate_E Nablus

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1976	160.78	160.11			158.17	157.78		156.73	156.50	155.46			157.93
1977	158.90	158.93	159.15	158.86	157.68					156.14		158.13	158.26
1978	158.13		157.54		153.44			152.43	152.28	152.07	150.30	151.67	154.15
1979	154.70			150.96	149.83			149.66	149.09	148.53	148.52	148.40	153.74
1980		158.03		166.06			164.91		162.86		161.56	161.06	162.41
1981	162.32		163.15			163.14	162.65			160.27		161.11	162.11
1982	160.29			158.64		156.07		154.58		153.47		157.55	156.77
1983			160.28	170.36		168.41				164.69		165.40	165.83
1984		164.69		166.05		163.86		157.75		156.60		158.61	161.26
1985		158.91		156.74		156.58		152.78		152.00		155.63	155.44
1986		156.24		150.52		152.94		148.75		149.67			151.62
1987		160.75		159.09		159.08		155.26		153.50			157.54
1988		160.37		164.10		162.48		160.16		159.66			161.35
1989	162.72	163.00		157.78		157.03		154.92				158.75	159.03
1990		160.80				156.58		154.83				152.79	156.25
1991							151.34					149.14	150.24
1992	167.85		180.35		177.23		173.97		170.44		169.52		173.23
1993	172.92				170.10				167.21				170.08
1994	167.87				163.60		161.48		158.27				162.81
1995	165.83		163.72		162.80				158.84		161.05		162.45
1996		162.91		161.11			156.61		154.91				158.89
1997			165.00		164.94		161.80		159.25		158.29		161.86
1998			162.88		164.97		162.50		159.93				162.57
1999													
2000					151.64								151.64
2001													
2002													
2003					165.40							163.84	164.62
2004	163.84				160.00						158.00		160.61
2005	161.34		166.55		163.20		162.25		157.10		157.00		161.24
2006	161.18											162.00	161.59
Ave.	162.76	160.43	163.97	159.92	161.64	159.91	159.47	155.00	158.61	155.13	157.52	158.24	159.70



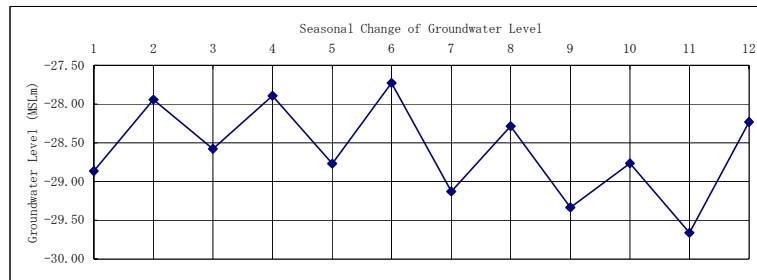
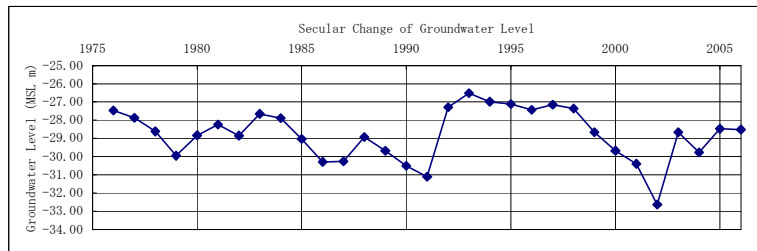
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 GWA_Name_E Neogene
 LOC_Name_E Wadi Al Far'a
 GR_Governate_E Nablus

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1976	-22.81	-23.32	-23.57	-23.48	-23.80	-23.83		-24.07		-24.17	-24.18	-24.05	-23.73
1977	-23.61		-23.67		-23.92	-24.08	-24.25				-24.49	-24.49	-24.07
1978	-23.94	-23.94	-24.24	-24.41	-25.26		-24.98		-25.28	-25.36	-25.51		-24.77
1979	-25.44	-25.44	-25.50	-25.55	-25.67	-26.00			-26.48		-26.75		-25.85
1980	-26.36		-25.78				-23.72				-23.81	-23.64	-24.66
1981	-24.06		-23.92		-23.58		-23.68		-23.92		-23.40		-23.76
1982	-23.53		-23.90		-24.25		-24.52		-24.67		-24.40		-24.21
1983	-24.11		-23.50		-22.70		-22.57		-22.57		-22.50		-22.99
1984	-22.67		-22.89		-22.99		-23.25		-23.51		-23.50		-23.14
1985	-23.28		-23.36		-23.70		-24.08		-24.48		-24.66		-23.93
1986	-24.34		-24.68		-24.98		-25.36		-25.93		-25.85		-25.19
1987	-25.41		-25.26		-24.78		-24.83		-25.42		-25.24		-25.16
1988	-25.57		-24.14		-23.83			-23.52	-23.83				-24.18
1989		-24.19	-24.25		-24.49		-24.83			-25.25	-25.15		-24.69
1990	-25.23		-25.36		-25.42		-25.83			-26.17	-26.36		-25.73
1991		-25.73		-25.58			-26.60	-26.98			-27.42		-26.46
1992	-24.82	-23.41		-22.17		-21.70		-21.63		-21.66			-22.56
1993	-21.50	-21.47		-21.02		-21.01		-21.24		-21.41		-21.56	-21.31
1994			-22.13	-22.16				-22.55		-22.70			-22.38
1995		-22.83		-22.25			-22.39	-22.58		-22.73		-22.78	-22.59
1996				-22.45		-22.70		-23.00		-23.19		-22.56	-22.78
1997		-22.75		-22.66		-22.16		-22.49		-23.16		-22.84	-22.68
1998		-23.39		-22.83		-23.05		-22.58		-23.32		-22.99	-23.02
1999		-23.08		-23.78		-24.14		-23.99		-24.26		-24.53	-23.96
2000		-24.20		-24.39		-24.48		-24.61					-24.42
2001			-25.14										-25.14
2002												-27.68	-27.68
2003			-25.49			-24.08				-24.18			-24.58
2004				-23.76		-26.11		-25.19		-27.89		-25.03	-25.60
2005				-23.44				-23.84					-23.64
2006		-24.28		-24.08									-24.18
Ave.	-24.17	-23.70	-24.26	-23.38	-24.24	-23.61	-24.35	-23.45	-24.63	-24.04	-24.69	-23.85	-24.16



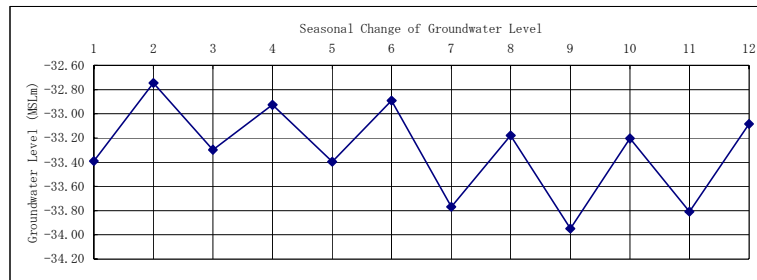
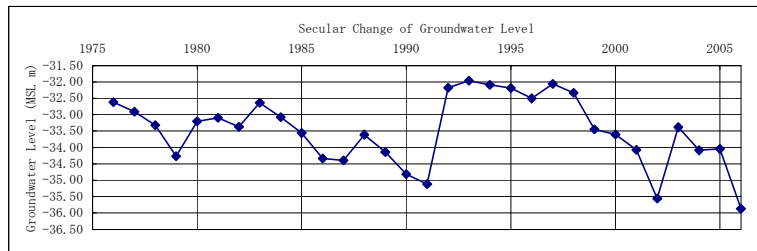
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 GWB_Name_E Eastern
 GWA_Name_E Neogene
 LOC_Name_E Wadi Al Far'a
 GR_Governate_E Nablus

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1976	-27.10	-27.15	-27.11	-27.26	-27.50	-27.58				-27.86	-27.92	-27.75	-27.47
1977	-27.47	-27.56	-27.39		-27.78	-27.93	-28.01		-28.15	-28.33	-28.20		-27.87
1978	-27.67	-27.74	-27.91	-28.14	-28.34		-28.84	-29.16	-29.34	-29.43	-29.60		-28.62
1979		-29.34	-29.41	-29.39	-29.80		-30.39		-30.56		-30.82		-29.96
1980	-30.09						-28.03		-28.35				-28.83
1981	-28.43		-28.41		-27.85		-28.15		-28.35				-28.24
1982	-27.90		-28.14		-28.69		-29.30		-29.67		-29.42		-28.85
1983	-28.92		-28.17		-27.28		-27.20		-27.25		-27.08		-27.65
1984			-27.49		-27.60		-27.98		-28.18		-28.17		-27.88
1985			-27.95		-28.50		-29.06		-29.90		-29.77		-29.04
1986	-29.18		-29.83		-30.19		-30.67		-31.15		-30.70		-30.29
1987	-30.32		-29.89		-30.18		-30.19		-30.66		-30.30		-30.26
1988	-30.23		-29.00		-28.60			-28.63	-29.08			-28.06	-28.93
1989		-28.92	-28.66		-29.80		-30.13			-30.49	-30.13		-29.68
1990	-29.91		-30.09		-30.58		-30.81		-30.89		-30.76		-30.51
1991		-30.30		-30.28			-31.26	-31.67		-32.00			-31.10
1992	-29.17	-27.50		-26.98		-26.69		-26.69		-26.69			-27.29
1993		-26.66		-26.50		-26.38		-26.50				-26.58	-26.52
1994			-26.76	-26.83		-26.92		-27.11		-27.32		-26.97	-26.99
1995		-27.19		-26.86			-26.91	-27.23		-27.25		-27.22	-27.11
1996		-27.40		-27.08		-27.33		-27.67		-27.92		-27.23	-27.44
1997		-27.08		-27.20		-27.25		-27.03		-27.08		-27.25	-27.15
1998		-27.63		-27.36		-27.09		-27.28		-27.39		-27.41	-27.36
1999		-27.60		-27.80		-28.61		-29.07		-29.57		-29.33	-28.66
2000		-28.48		-29.47		-30.38		-30.40					-29.68
2001			-30.40										-30.40
2002												-32.76	-32.51
2003			-29.22			-27.61			-29.17				-28.67
2004				-28.59		-28.93		-29.13		-32.62		-29.55	-29.76
2005				-28.09				-28.43				-28.91	-28.48
2006		-28.61		-28.41									-28.51
Ave.	-28.87	-27.94	-28.58	-27.89	-28.77	-27.73	-29.13	-28.28	-29.33	-28.76	-29.66	-28.23	-28.77



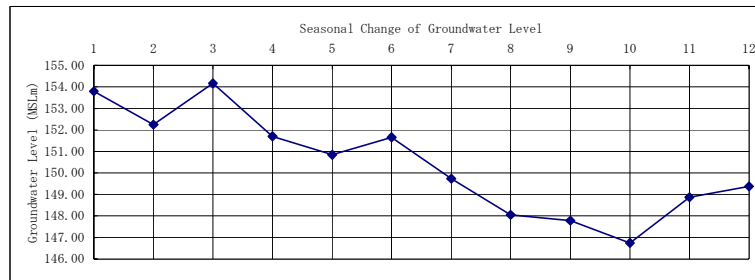
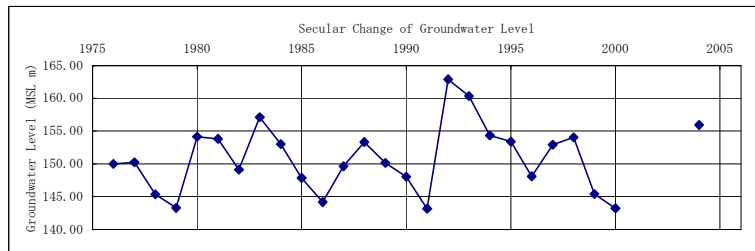
PMD_Code W18-18/031
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 GWA_Name_E Neogene
 LOC_Name_E Wadi Al Far'a
 GR_Governate_E Nablus

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1976	-32.49	-32.47	-32.46	-32.49	-32.65	-32.60		-32.79		-32.78	-32.81		-32.62
1977	-32.58	-32.60	-32.49		-32.76	-32.88	-32.99		-33.15	-33.35	-33.21	-33.10	-32.91
1978	-32.56	-32.65	-32.74	-33.01	-33.31		-33.78	-33.83		-34.10	-33.90		-33.32
1979	-34.03	-33.71	-33.79	-33.94	-34.08	-34.69	-34.47		-34.83		-34.88		-34.27
1980	-34.01		-33.42		-32.69		-32.83		-33.28		-32.99		-33.20
1981	-33.24		-32.99		-32.81		-33.10		-33.31				-33.09
1982	-32.92		-32.96		-33.47		-33.78				-33.72		-33.37
1983	-33.38						-32.40		-32.44		-32.33		-32.64
1984					-32.78		-33.01		-33.38		-33.13		-33.07
1985	-32.97		-32.69		-33.38		-34.13		-34.24		-33.94		-33.56
1986	-33.56		-34.08		-34.17		-34.53		-35.15		-34.53		-34.34
1987	-34.29		-34.10		-34.24		-34.40		-34.85		-34.49		-34.39
1988	-34.33		-33.44		-33.56			-33.53	-33.88			-32.92	-33.61
1989		-33.63	-33.56				-34.33			-34.78	-34.40		-34.14
1990	-34.06		-34.49		-34.85		-35.06		-35.26		-35.19		-34.82
1991		-34.26		-34.78			-35.62	-35.79					-35.11
1992	-33.06	-32.19		-31.94		-31.93		-31.97		-31.99			-32.18
1993		-31.94		-31.94		-31.93		-32.03				-31.97	-31.96
1994			-31.93	-32.03		-32.13		-32.22		-32.42		-31.80	-32.09
1995				-31.94			-32.12	-32.33		-32.40		-32.13	-32.18
1996		-32.29		-32.03		-32.51		-32.92		-33.13		-32.13	-32.50
1997		-31.84		-32.08		-31.92		-32.08		-32.33		-32.13	-32.06
1998		-32.26		-32.13		-32.15		-32.49		-32.63		-32.35	-32.34
1999		-32.53		-33.01		-33.26		-33.85		-34.21		-33.83	-33.45
2000		-33.31		-33.04		-33.99		-34.08					-33.60
2001			-34.08										-34.08
2002												-35.56	-35.56
2003			-33.56		-32.81	-33.58			-33.60				-33.38
2004				-33.63		-33.99		-34.28		-34.35		-34.19	-34.09
2005								-33.49				-34.60	-34.05
2006				-35.87									-35.87
Ave.	-33.39	-32.74	-33.30	-32.93	-33.40	-32.89	-33.77	-33.18	-33.95	-33.20	-33.81	-33.08	-33.48



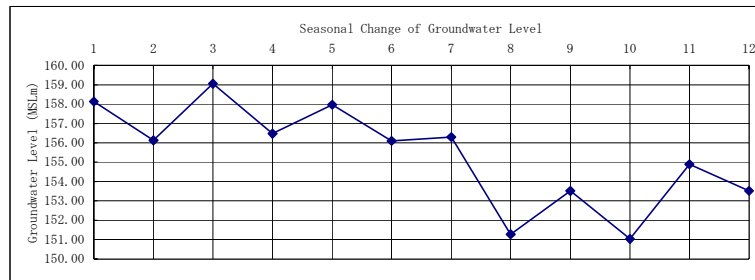
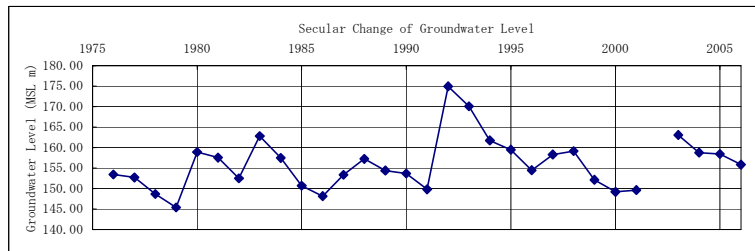
PMD_Code W18-18/032
 GWB_Name_E North Eastern
 GWA_Name_E Eocene
 LOC_Name_E Ras Al-Far'a
 GR_Governate_E Tubas

	1	2	3	4	5	6	7	8	9	10	11	12	Ave.
1976	152.55	152.15	152.19	151.74	149.72	149.32		148.94	148.14	147.38	147.26	150.32	149.98
1977	150.79	150.99	151.19	150.74	149.56					148.18		150.16	150.23
1978	150.53		149.53		145.12		144.55	143.07	142.52	142.49	143.55	146.70	145.34
1979	147.30		145.35	143.48	141.96		142.71	141.78	140.89	141.39	141.31	146.59	143.28
1980		150.26		157.19		156.40		154.57		153.59	152.82		154.14
1981	154.18		155.06			154.68	153.98		152.27		152.78		153.83
1982	152.52			150.90		148.24		147.02		146.28		149.66	149.11
1983			152.48		160.76		159.14	157.46		155.98		156.78	157.10
1984		156.18		157.71		155.58		149.92		148.43		150.33	153.03
1985		150.89		149.13		148.50		146.36		144.36		147.95	147.87
1986		148.61		144.60		144.42		140.90		138.64		147.81	144.17
1987		152.34		151.01		150.46		147.74		145.84		150.34	149.62
1988		152.12		155.61		154.75		152.87		151.26			153.33
1989	154.25	154.42		150.02		149.28		147.42		145.16		150.40	150.14
1990		152.37		149.23		149.10		146.60		145.39		145.44	148.02
1991			149.81		142.18		142.56		140.95		140.39		143.18
1992	158.45		168.52		166.12		163.47		160.96		159.86		162.90
1993	162.91		162.80		160.42				157.95		157.63		160.34
1994	158.67		157.59		154.21		152.91		150.60		151.96		154.33
1995	156.86		155.48		154.07		152.13		149.84		151.98		153.40
1996		154.40		152.55		149.49		145.86		142.98		143.39	148.11
1997	150.35		156.21		156.19		153.11		149.63		151.96		152.91
1998	155.08		154.63		156.25		153.77		150.49				154.05
1999	153.63		149.07		142.78				141.15		140.37		145.40
2000	146.72				143.68		141.93		140.53				143.22
2001													
2002													
2003													
2004	155.92												155.92
2005													
2006													
Ave.	153.80	152.25	154.17	151.70	150.84	151.66	149.73	148.05	147.78	146.74	148.87	149.38	150.88



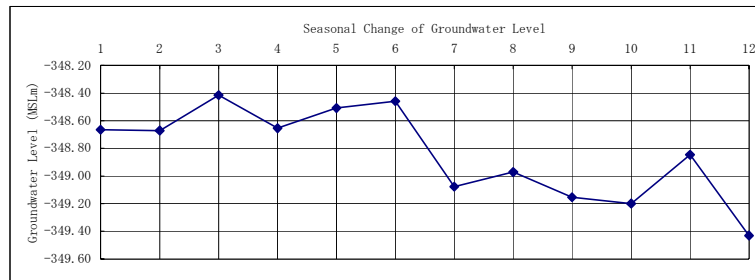
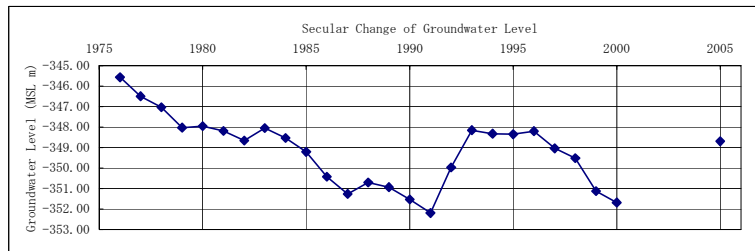
PMD_Code W18-18/033
 GWA_Name_E North Eastern
 GWA_Name_E Eocene
 LOC_Name_E Ras Al-Far'a
 GR_Governate_E Tubas

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1976	155.73	155.20	154.79	154.84	153.48	153.13		152.19	151.91	150.11		152.60	153.40
1977	152.99		153.36	153.30	152.86					151.25		152.29	152.68
1978	152.68		151.64		149.40		148.39	146.99	146.66	146.41	146.83		148.63
1979	148.34		147.50	146.50	145.43		144.91	144.14	144.12	143.63	143.54		145.35
1980				161.99		160.80			158.39	156.88	156.29		158.87
1981	157.58		158.62			158.74	157.57			156.57		156.00	157.51
1982	155.92			153.52		151.57				149.94		151.37	152.46
1983			156.59	168.04		166.35				161.07		161.79	162.77
1984		160.66		161.56		159.32		152.42				153.23	157.44
1985				152.28		151.61		151.12		148.30		150.09	150.68
1986		150.29				147.51		146.19		146.61		150.07	148.13
1987		155.43		155.79				151.92		150.52		152.87	153.31
1988		155.07		160.64		158.72		156.38		155.22			157.21
1989	158.27	158.02		154.11		154.46		150.76		151.62		153.30	154.36
1990		155.51		155.12		154.88		153.52		151.83		150.97	153.64
1991			152.69		150.57		149.66		148.32		147.60		149.77
1992	165.10		183.26		179.25		175.30				171.63		174.91
1993	173.79		173.97		170.30				166.40		165.77		170.05
1994	166.99		165.09		161.37		160.06		157.95		158.84		161.72
1995	163.82		161.21		159.65		157.82		156.68		157.65		159.47
1996		158.82		157.58		154.36		153.17		151.43		151.32	154.45
1997	154.02		161.56		161.04		160.02		156.79		156.18		158.27
1998	159.36		158.84		161.40		159.01		156.97				159.12
1999	157.95		154.56		151.19				148.83		148.01		152.11
2000	149.52				149.19		148.30		149.60				149.15
2001			149.60										149.60
2002													
2003					165.96							160.12	163.04
2004	162.32				159.36		158.92				154.35		158.74
2005	156.32		163.10		160.77		158.83		156.97		154.42		158.40
2006	155.80												155.80
Ave.	158.14	156.13	159.06	156.47	157.98	156.10	156.30	151.27	153.51	151.03	154.89	153.52	156.03



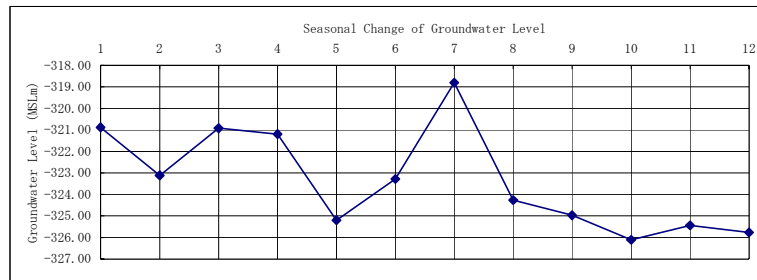
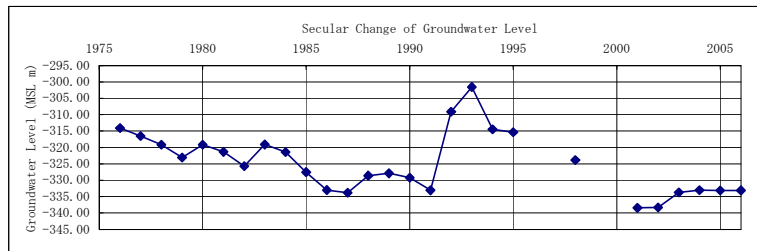
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 LOC_Name_E Jericho (Ariha)
 GR_Governate_E Jericho

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1976	-345.16	-345.34	-345.36	-345.39	-345.40	-345.45	-345.52	-345.62	-345.70	-345.86	-345.96	-346.16	-345.58
1977	-346.24	-346.27	-346.30	-346.46	-346.50	-346.53	-346.50	-346.77		-346.74	-346.55	-346.61	-346.50
1978	-346.18	-346.08	-347.37	-347.43	-347.04	-347.06	-347.13	-347.16	-347.19	-347.33	-347.42		-347.04
1979	-347.51	-347.64	-347.95		-347.83	-347.93	-347.81		-348.03	-348.32	-348.63	-348.66	-348.03
1980		-348.35			-347.58	-347.58		-347.89			-347.83	-348.56	-347.96
1981		-348.13		-347.85		-347.73				-348.37		-348.88	-348.19
1982		-348.50		-348.44		-348.63		-348.25		-348.95		-349.20	-348.66
1983		-348.81	-348.14	-347.00		-347.39		-347.53		-347.78		-349.73	-348.05
1984		-348.09		-348.14		-348.29		-348.74		-349.13		-348.85	-348.54
1985		-348.93		-348.75		-348.94		-349.20		-349.63		-349.86	-349.22
1986		-349.38		-350.02		-350.33		-350.85		-350.81		-351.18	-350.43
1987		-350.78		-350.89		-351.06		-351.40		-351.67		-351.80	-351.27
1988		-351.38		-349.96		-350.10		-350.74		-351.00		-351.06	-350.71
1989		-350.86		-350.98			-350.61	-350.91		-351.33			-350.94
1990	-351.43	-351.26		-351.19		-351.40		-351.57		-351.87		-352.05	-351.54
1991			-352.06		-352.08		-352.20		-352.20		-352.45		-352.20
1992	-351.70		-350.28		-349.36		-349.12		-349.45		-349.92		-349.97
1993	-348.96		-347.80		-347.62				-348.10		-348.30		-348.16
1994	-348.16		-348.04		-348.08				-348.60		-348.75		-348.33
1995	-348.37		-348.04		-347.89				-348.57		-348.90		-348.35
1996		-347.85	-347.93		-347.97		-348.35				-348.92		-348.20
1997	-349.00		-348.76		-348.84		-349.30		-348.72		-349.64		-349.04
1998	-349.50		-349.28		-349.20		-349.63		-350.03				-349.53
1999					-350.60		-350.95		-351.26		-351.73		-351.14
2000	-351.77		-351.25		-351.63		-351.80		-352.00				-351.69
2001													
2002													
2003													
2004													
2005		-349.75	-347.65										-348.70
2006													
Ave.	-348.66	-348.67	-348.41	-348.65	-348.51	-348.46	-349.08	-348.97	-349.15	-349.20	-348.85	-349.43	-349.15



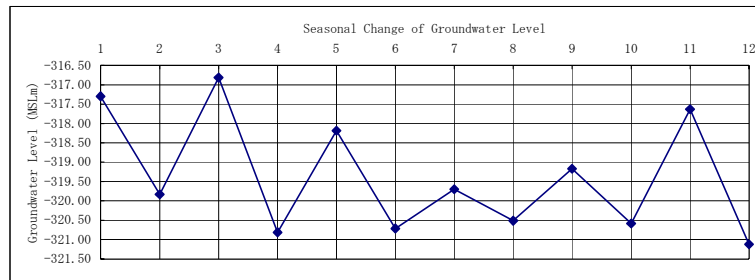
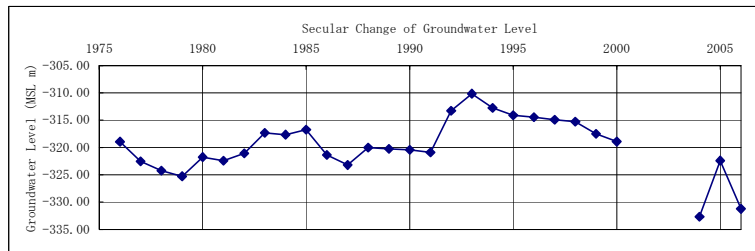
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 GWA_Name_E Alluvium
 LOC_Name_E Jericho (Ariha)
 GR_Governate_E Jericho

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1976				-312.60	-313.83	-313.75	-313.41	-313.11	-314.29	-315.06	-315.43	-315.49	-314.11
1977	-314.66	-315.18	-315.59	-316.54	-317.04			-316.57			-318.21	-318.24	-316.50
1978	-317.59	-318.08	-317.77	-319.04			-317.06	-319.65	-320.10	-321.47	-321.77		-319.17
1979	-321.21	-320.86	-322.01	-322.74	-323.20	-323.08	-323.14		-323.99	-324.74	-325.24	-323.13	-323.03
1980		-320.06				-317.09		-317.87			-320.54	-320.28	-319.17
1981		-318.78		-318.80		-320.71				-323.66		-324.86	-321.36
1982				-325.04				-325.52		-326.23		-326.12	-325.73
1983		-324.14	-318.99	-316.87		-315.51				-319.54		-319.60	-319.11
1984		-319.88		-317.30		-317.72		-322.36		-325.00		-326.13	-321.40
1985		-325.63		-326.42		-326.76		-327.09		-329.48		-329.85	-327.54
1986		-330.35				-332.51		-333.42		-334.56		-334.06	-332.98
1987		-333.46				-333.11		-333.34		-334.44		-334.74	-333.82
1988						-327.65		-327.55				-330.59	-328.60
1989		-327.81		-328.85			-327.33	-326.71				-328.78	-327.90
1990	-328.94			-328.91		-328.24		-328.04				-331.87	-329.20
1991			-331.40		-333.14					-333.27		-334.35	-333.04
1992			-315.52		-306.74		-305.74			-308.47			-309.12
1993	-304.45		-298.62										-301.54
1994	-311.13						-313.95		-316.15		-316.70		-314.48
1995	-314.51						-316.16						-315.34
1996													
1997													
1998	-324.49		-323.25										-323.87
1999													
2000										-338.44			-338.44
2001													
2002	-338.14									-338.39			-338.27
2003					-334.99				-334.08		-331.99		-333.69
2004					-331.69		-333.59				-333.79		-333.02
2005			-333.09		-333.44				-332.91		-333.07		-333.13
2006	-333.66		-332.94		-332.69								-333.10
Ave.	-320.88	-323.11	-320.92	-321.19	-325.20	-323.28	-318.80	-324.27	-324.97	-326.11	-325.44	-325.77	-324.69



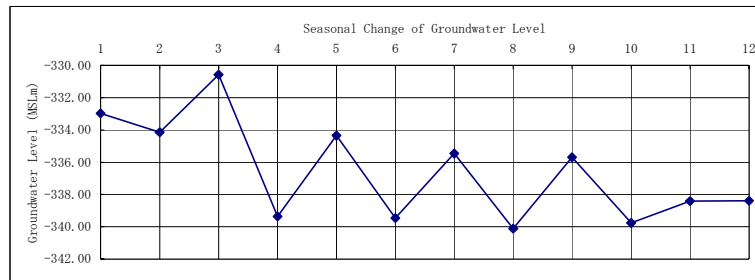
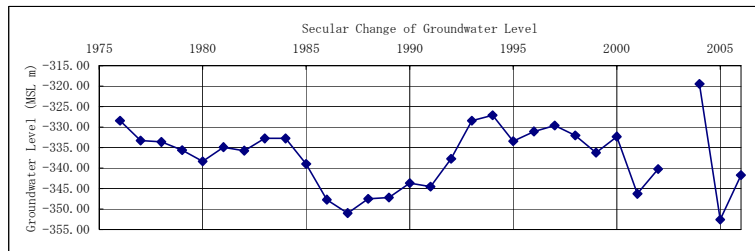
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 GR_Governate_E Jericho

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1976	-315.95	-316.36	-316.46	-319.33	-321.28	-320.09		-317.80	-320.69	-321.02		-320.47	-318.94
1977	-319.54	-320.47	-322.52	-322.35			-322.77	-322.95			-325.19	-324.63	-322.55
1978	-322.42	-323.58	-323.40	-325.46		-324.51	-324.50	-324.34	-324.23				-324.23
1979	-324.16	-323.42	-325.32	-326.07	-326.20	-326.07	-325.04		-325.66	-326.76		-324.04	-325.27
1980		-322.12		-322.64		-320.42		-322.01				-321.62	-321.76
1981		-320.42		-322.47		-322.68		-322.59		-322.97		-323.52	-322.44
1982		-320.06				-321.47		-321.45		-321.67		-320.74	-321.07
1983		-318.90	-316.84			-316.36				-318.10		-316.44	-317.32
1984		-317.36		-315.94		-315.57		-317.92		-319.57		-319.67	-317.67
1985		-318.43		-316.97		-316.09		-315.83		-316.47		-316.63	-316.73
1986		-317.14		-318.97		-323.41				-324.24		-323.08	-321.36
1987		-323.60		-324.35		-323.11		-322.47		-322.64		-323.10	-323.21
1988		-321.59		-320.17		-319.46		-319.06		-320.02		-319.89	-320.03
1989		-319.69		-321.26			-319.62	-320.09		-320.69			-320.27
1990	-320.20	-320.21		-321.11		-320.09		-319.69		-320.97		-320.80	-320.43
1991			-320.58		-320.55		-319.86		-321.46		-322.12		-320.91
1992	-318.22		-314.34		-312.26		-309.55			-312.55	-312.85		-313.29
1993	-309.84		-308.44		-308.88				-311.13		-312.51		-310.16
1994	-311.94		-312.88		-313.71		-311.88				-313.36		-312.75
1995			-313.02		-313.60				-314.79		-315.06		-314.11
1996		-314.04		-314.35							-315.04		-314.47
1997	-314.01		-313.08		-317.17		-313.91		-316.07		-315.39		-314.93
1998			-313.65		-315.79				-316.44				-315.29
1999	-315.64		-316.67				-317.16		-318.86		-319.14		-317.49
2000	-318.39		-318.26		-319.37		-319.74						-318.94
2001													
2002													
2003													
2004							-332.69						-332.69
2005									-322.39				-322.39
2006					-331.24								-331.24
Ave.	-317.30	-319.83	-316.81	-320.81	-318.18	-320.71	-319.70	-320.51	-319.17	-320.59	-317.63	-321.12	-319.71



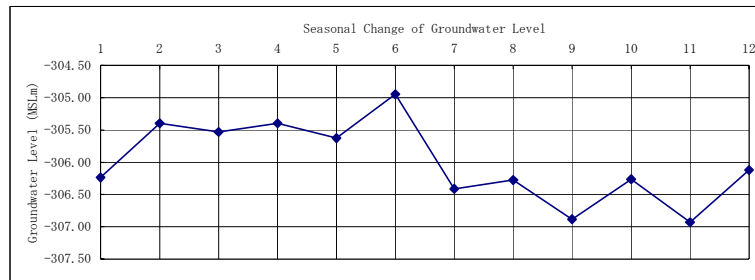
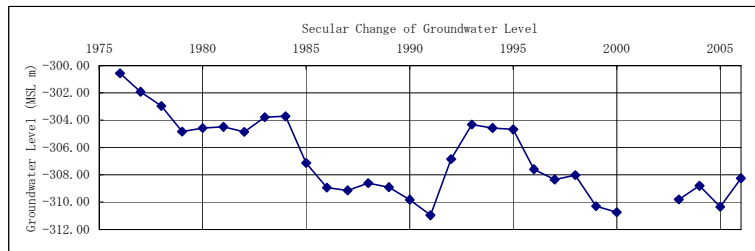
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 GR_Governate_E Jericho

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1976	-325.08	-323.18	-323.41	-329.25	-330.66	-332.12		-330.06	-330.49	-330.36		-330.06	-328.47
1977	-327.21	-330.05	-330.87	-333.99	-334.92	-333.25	-335.78	-336.47			-337.50	-333.30	-333.33
1978	-328.49	-332.05	-330.85	-335.63	-336.89	-333.00	-334.68	-333.14	-334.25	-336.80	-334.36		-333.65
1979	-331.77	-329.53	-335.51	-336.61	-337.40	-337.93	-337.37		-335.76	-339.21	-337.99	-333.19	-335.66
1980				-338.52		-339.52		-339.16			-339.89	-334.79	-338.38
1981		-332.08		-335.66		-336.15		-336.85				-333.95	-334.94
1982		-330.52		-337.12		-336.44		-335.96		-339.10		-335.65	-335.80
1983				-335.96		-334.38		-330.62		-333.08		-329.94	-332.80
1984		-330.33		-329.63		-329.54		-332.62		-337.75		-336.82	-332.78
1985		-333.87		-339.80		-343.25						-339.18	-339.02
1986		-341.13		-347.70		-350.25		-351.85				-347.65	-347.72
1987		-347.48		-351.73		-352.37		-352.10		-352.93		-349.45	-351.01
1988		-339.47		-349.55		-351.26		-352.75		-346.05		-346.12	-347.53
1989		-341.66		-347.29			-347.95	-347.28				-351.82	-347.20
1990	-346.55	-338.80		-342.10		-343.01		-342.75				-348.94	-343.69
1991			-346.87		-345.09		-341.29		-343.90		-345.63		-344.56
1992	-339.00		-337.10		-343.16		-337.61			-335.56	-334.30		-337.79
1993	-329.92		-325.63		-326.50				-327.92		-332.31		-328.46
1994	-325.68		-325.22		-328.20		-325.85		-330.74		-327.25		-327.16
1995			-331.15		-332.53						-336.65		-333.44
1996		-327.85		-326.22		-331.90		-334.32			-335.20		-331.10
1997	-328.42		-327.62						-328.05		-334.36		-329.61
1998	-327.38		-329.14		-332.80		-334.88		-336.10				-332.06
1999	-335.98		-336.20						-336.55				-336.24
2000	-334.18		-322.20		-332.15		-340.85				-346.30		-332.35
2001													-346.30
2002	-340.25									-340.30			-340.27
2003													
2004							-319.49						-319.49
2005									-353.20		-352.03		-352.61
2006	-341.74												-341.74
Ave.	-332.97	-334.14	-330.57	-339.37	-334.35	-339.46	-335.46	-340.12	-335.70	-339.77	-338.41	-338.39	-337.17



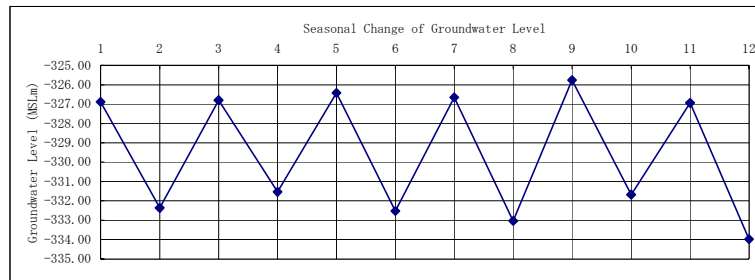
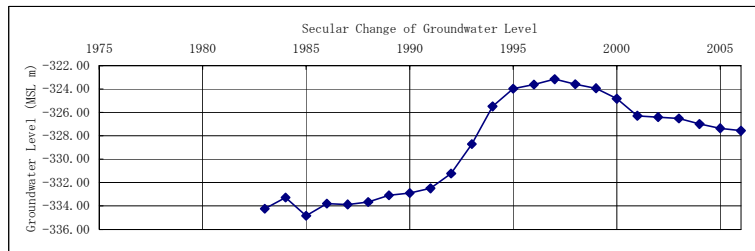
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 GR_Governate_E Jericho

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1977	-301.57	-301.52	-301.52	-301.46	-301.60	-301.71	-301.87	-302.15		-302.32	-302.58	-302.86	-301.92
1978	-302.55	-302.39	-302.50	-302.53	-302.63	-302.86	-302.90	-303.21	-303.41	-303.72	-303.88		-302.96
1979	-303.84	-303.69	-303.77	-303.73	-304.73	-304.90	-305.12		-305.58	-306.02	-306.09	-305.72	-304.84
1980			-304.78		-304.10	-304.09		-304.53			-305.00	-304.97	-304.58
1981		-304.20		-304.13		-304.17		-304.42		-304.86		-305.18	-304.49
1982		-304.97		-304.38		-304.65		-305.35		-304.92		-304.91	-304.86
1983		-304.00	-302.77	-303.80		-303.81		-303.96		-304.12		-304.01	-303.78
1984		-303.78		-300.43		-300.87		-305.32		-305.87		-306.08	-303.72
1985		-306.50		-306.26		-306.68		-307.22		-308.00		-308.17	-307.14
1986		-308.00		-308.47		-308.87		-309.34		-309.87		-309.08	-308.94
1987		-308.27		-308.09		-308.66		-309.74		-310.01		-310.06	-309.14
1988		-308.55		-308.05		-308.28		-308.83		-309.39			-308.62
1989		-308.43		-308.28			-308.37	-309.38				-310.05	-308.90
1990	-309.70	-309.00		-308.72		-309.43		-310.26		-310.76		-310.88	-309.82
1991			-310.30		-310.36		-310.90		-311.35		-311.89		-310.96
1992	-308.83		-306.46		-306.49		-306.25			-306.61	-306.51		-306.86
1993	-304.75		-303.90		-303.96				-304.44		-304.53		-304.32
1994	-304.42		-303.89		-304.10		-304.65		-305.09		-305.29		-304.57
1995	-304.04		-303.84		-303.97		-304.47		-305.35		-306.40		-304.68
1996		-307.48		-307.03		-306.90		-307.59			-308.96		-307.59
1997	-308.46		-307.81		-307.54		-308.30		-308.93		-309.04		-308.35
1998	-308.26		-307.57		-307.72		-307.93		-308.60				-308.02
1999			-308.90				-310.15		-310.83		-311.30		-310.29
2000	-311.03		-309.90		-310.45		-311.05		-311.25				-310.74
2001													
2002													
2003								-309.80					-309.80
2004	-307.00			-311.02			-306.20				-311.00		-308.81
2005	-310.80		-310.50		-309.75								-310.35
2006	-308.25												-308.25
Ave.	-306.24	-305.40	-305.53	-305.40	-305.63	-304.95	-306.41	-306.28	-306.88	-306.26	-306.93	-306.12	-306.82



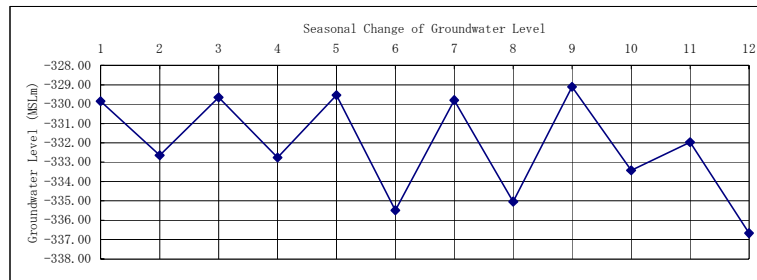
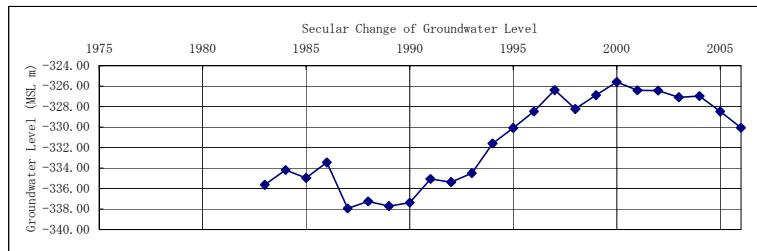
PMD_Code W19-14/080
 GWB_Name_E Eastern
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 LOC_Name_E Jericho (Ariha)
 GR_Governate_E Jericho

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1976													
1977													
1978													
1979													
1980													
1981													
1982													
1983												-334.24	-334.24
1984		-333.97		-331.48		-331.61		-334.46				-334.84	-333.27
1985		-334.55		-334.69		-334.84		-334.82		-335.41		-334.69	-334.83
1986		-333.90		-333.82		-333.76		-333.76		-333.78		-333.78	-333.80
1987		-334.08		-334.37		-333.85		-333.73		-333.67		-333.50	-333.87
1988		-333.10		-333.18		-333.84		-334.06		-334.00		-333.77	-333.66
1989		-333.15		-332.96			-332.67	-333.32			-333.33		-333.09
1990	-333.21	-332.78		-332.68		-332.82		-332.74		-333.00		-333.05	-332.90
1991			-332.72		-332.62		-332.50		-332.37		-332.25		-332.49
1992	-331.92		-331.61		-331.60		-330.93			-330.52	-330.73		-331.22
1993	-330.02		-329.64		-329.24				-327.52		-327.11		-328.71
1994	-326.43		-325.91		-325.51		-324.93		-325.25		-324.94		-325.50
1995	-324.59		-324.12		-323.49				-323.74		-323.96		-323.98
1996		-323.39		-323.57		-323.28		-323.37			-324.50		-323.62
1997	-323.60		-323.25		-323.53		-322.81		-322.72		-323.11		-323.17
1998	-323.49		-323.80		-323.71		-323.34		-323.62				-323.59
1999	-323.84		-324.24		-323.76		-323.87		-323.89		-324.07		-323.95
2000	-324.48		-324.57		-324.65		-325.11		-325.37				-324.84
2001										-326.29			-326.29
2002	-326.09									-326.72			-326.40
2003	-326.89				-327.01	-326.97		-327.35			-324.37		-326.52
2004				-327.10	-326.95		-326.93				-327.01		-327.00
2005	-327.27		-327.27		-327.07				-327.32		-327.87		-327.36
2006	-327.67		-327.57		-327.47								-327.57
Ave.	-326.88	-332.36	-326.79	-331.54	-326.42	-332.53	-326.65	-333.03	-325.76	-331.67	-326.94	-333.98	-328.83



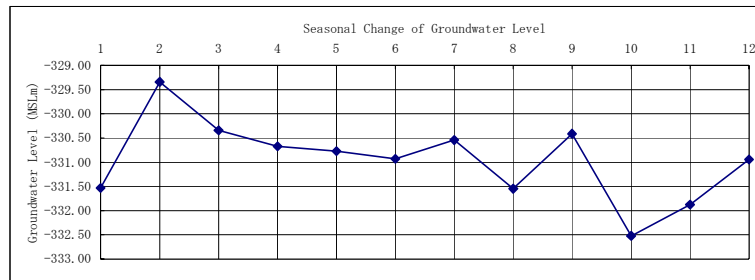
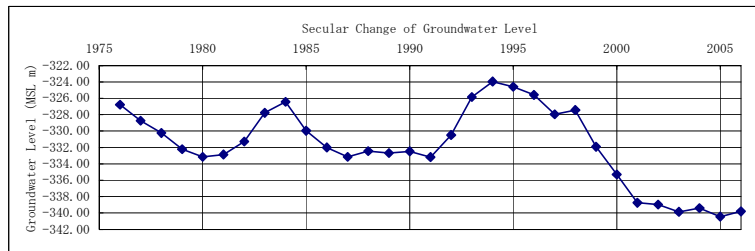
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 GWA_Name_E Alluvium
 LOC_Name_E Jericho (Ariha)
 GR_Governate_E Jericho

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1977													
1978													
1979													
1980													
1981													
1982													
1983												-335.65	-335.65
1984			-333.52		-331.97		-334.57					-336.73	-334.20
1985	-336.61		-337.40		-335.69		-334.76					-330.37	-334.97
1986	-326.86		-328.32		-335.97		-338.03					-338.12	-333.46
1987			-336.03		-336.76		-337.33		-339.75			-339.91	-337.96
1988					-336.35		-336.77					-338.64	-337.25
1989	-338.23					-336.14					-338.79		-337.72
1990	-338.49		-338.44		-336.17		-336.64		-337.27		-337.30		-337.38
1991		-335.99		-334.69		-334.06				-335.55			-335.07
1992	-334.74	-333.96		-335.91		-333.36			-337.21	-337.05			-335.37
1993	-332.61		-334.27		-334.27				-336.61				-334.50
1994	-332.90		-333.81		-330.38		-328.99				-331.89		-331.59
1995		-331.29		-328.89									-330.09
1996	-328.90		-328.66		-326.87		-326.34				-331.62		-328.48
1997	-327.97		-322.17				-326.67		-326.77		-328.43		-326.40
1998		-327.82		-326.74					-330.18				-328.25
1999	-328.52	-328.99				-325.81		-325.62		-325.55			-326.90
2000	-325.50	-325.45		-325.48				-326.03					-325.62
2001										-326.42			-326.42
2002	-326.45									-326.46			-326.46
2003	-326.77			-327.05				-327.15			-327.42		-327.10
2004	-326.97		-326.97	-327.05		-326.97							-326.99
2005	-327.07		-327.02	-327.59					-329.37		-331.41		-328.49
2006	-330.12		-330.02										-330.07
Ave.	-329.84	-332.65	-329.65	-332.76	-329.54	-335.49	-329.79	-335.04	-329.10	-333.42	-331.97	-336.67	-331.52



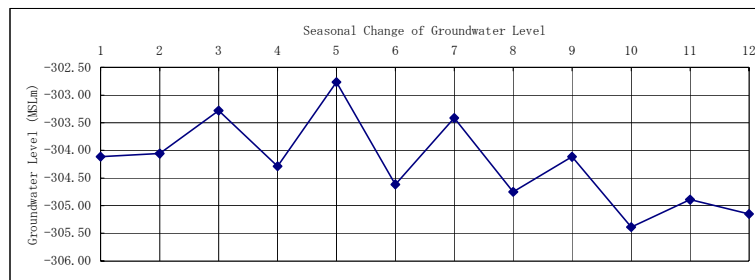
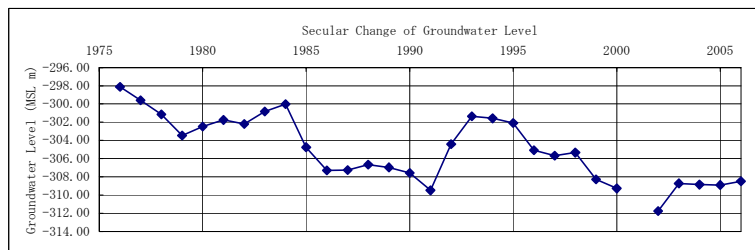
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 GWA_Name_E Alluvium
 LOC_Name_E Jericho (Ariha)
 GR_Governate_E Jericho

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1976	-325.43	-325.62	-325.85	-326.28	-327.62	-327.68	-326.46	-326.47	-326.64	-327.72	-328.05	-327.60	-326.78
1977	-326.87	-327.25	-327.56	-328.45	-328.81	-328.81	-329.16	-329.48		-329.77	-330.49	-329.49	-328.74
1978	-328.50	-328.75	-329.03	-330.35	-330.89	-330.54	-331.10	-330.48	-330.39	-331.35	-331.18		-330.23
1979	-330.43	-330.40	-331.46	-332.26	-332.62	-332.76	-332.70		-332.60	-333.38	-333.39	-332.42	-332.22
1980		-331.36		-332.38		-333.52		-333.70			-334.33	-333.55	-333.14
1981		-331.42		-332.48		-333.23		-333.19		-333.75		-333.09	-332.86
1982		-331.81		-332.57		-332.97		-329.70				-329.35	-331.28
1983		-328.05	-327.72	-328.24		-328.58		-327.35		-327.67		-326.81	-327.77
1984		-326.60		-324.40		-324.15		-327.34		-328.15		-327.91	-326.42
1985		-327.52		-328.78		-329.63		-330.17		-332.72		-330.94	-329.96
1986		-329.80		-332.57		-332.28		-332.89		-332.66		-331.81	-332.00
1987		-331.97		-332.88		-333.61		-333.65		-333.61		-333.19	-333.15
1988		-331.10	-331.80	-331.80		-332.91		-333.33		-333.17		-332.35	-332.44
1989		-331.37		-332.41			-333.05	-332.95			-333.64		-332.68
1990	-332.38	-331.23		-331.97		-332.34		-332.20		-333.40		-333.76	-332.47
1991			-333.32		-333.62		-333.31		-331.95		-333.65		-333.17
1992	-332.13		-331.22		-331.60		-329.78		-329.22		-328.89		-330.47
1993	-327.28		-325.79		-325.47				-325.02		-325.60		-325.83
1994	-324.61		-323.35		-323.95		-323.48		-324.00		-324.34		-323.96
1995	-323.42		-323.66		-324.70				-325.07		-326.19		-324.61
1996		-325.17		-324.30	-324.87		-326.15				-327.45		-325.59
1997	-327.21		-326.35		-327.29		-328.63		-329.36		-328.94		-327.96
1998	-327.59		-326.48		-326.32		-327.79		-328.95				-327.43
1999	-330.30		-330.63		-331.75		-331.90		-332.86		-334.06		-331.92
2000	-334.23		-334.65		-334.60		-334.65		-338.33				-335.29
2001										-338.75			-338.75
2002	-338.70									-339.22			-338.96
2003	-340.18		-339.47		-339.28			-340.34			-340.00		-339.85
2004	-338.70			-339.30	-339.40		-339.45				-340.22		-339.41
2005	-339.38		-340.00		-340.35				-340.95		-341.50		-340.44
2006	-340.29		-339.30										-339.80
Ave.	-331.54	-329.34	-330.34	-330.67	-330.77	-330.93	-330.54	-331.55	-330.41	-332.52	-331.88	-330.94	-331.79



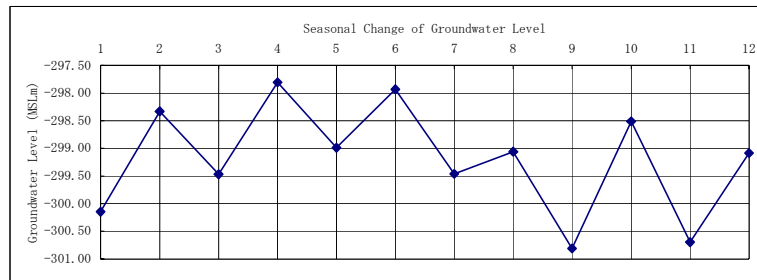
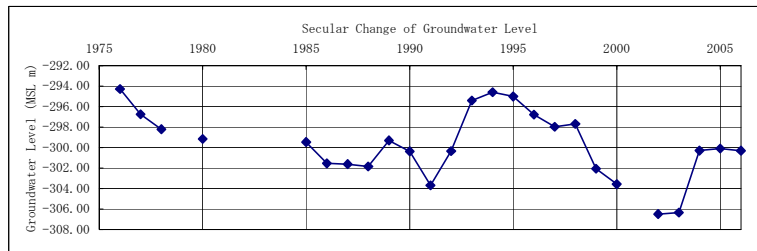
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 GWA_Name_E Alluvium
 LOC_Name_E A1 'Auja
 GR_Governate_E Jericho

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1976		-297.42	-296.89		-296.97		-297.60	-298.12	-298.45	-298.96	-299.16	-299.49	-298.12
1977	-299.46	-299.25	-298.81	-298.72	-298.95	-299.46	-299.59	-300.11		-300.53		-301.06	-299.59
1978	-300.61	-300.40	-300.25	-300.27	-300.44		-301.14	-301.51		-301.76	-302.93	-302.22	-301.15
1979	-302.24	-301.88			-303.18	-303.57	-303.82		-304.26	-304.62		-304.20	-303.47
1980			-302.58		-301.85		-302.62		-302.34		-302.98		-302.47
1981	-302.24		-301.70		-301.41		-301.17		-301.69		-302.38		-301.77
1982	-302.82				-301.45		-301.88		-302.21		-302.60		-302.19
1983	-302.07		-300.04		-300.84				-300.54		-300.63		-300.82
1984	-300.49		-296.70		-297.20		-298.74		-303.23		-303.70		-300.01
1985	-303.99		-303.72		-303.93		-304.94				-307.22		-304.76
1986	-306.68		-306.46		-306.89		-307.69		-308.22		-307.86		-307.30
1987			-305.56		-305.97		-307.36		-308.67		-308.79		-307.27
1988	-307.32		-305.91		-305.66		-306.26		-307.02		-307.88		-306.68
1989	-306.56		-305.57		-305.84		-307.12		-308.14		-308.57		-306.97
1990	-307.54		-306.45		-306.40		-307.87				-309.62		-307.58
1991			-309.31	-308.09		-309.47		-310.06		-310.80		-309.20	-309.49
1992		-306.42		-304.36		-303.91		-303.71		-303.70		-304.46	-304.43
1993		-301.59		-301.27		-300.97		-301.31		-301.60		-301.38	-301.35
1994		-301.04		-300.44		-301.00		-302.14		-302.86		-301.99	-301.58
1995		-300.88		-300.68		-301.06				-303.11		-304.78	-302.10
1996		-304.37		-303.72		-303.94		-305.10		-306.54		-306.86	-305.09
1997		-305.73		-304.71		-305.02		-305.54		-306.52		-306.60	-305.69
1998		-305.32		-304.62		-304.74		-305.51		-306.55			-305.35
1999		-306.74				-308.16						-309.91	-308.27
2000		-309.14		-307.99		-309.71		-310.26					-309.28
2001													
2002											-311.76		-311.76
2003	-311.43		-309.26		-307.24				-306.97				-308.72
2004		-307.07		-308.28		-308.99		-309.74		-310.79		-308.29	-308.86
2005		-309.29		-308.27				-308.67		-309.56		-308.74	-308.91
2006		-308.39		-308.60									-308.50
Ave.	-304.11	-304.06	-303.28	-304.29	-302.76	-304.62	-303.41	-304.75	-304.12	-305.39	-304.89	-305.15	-304.98



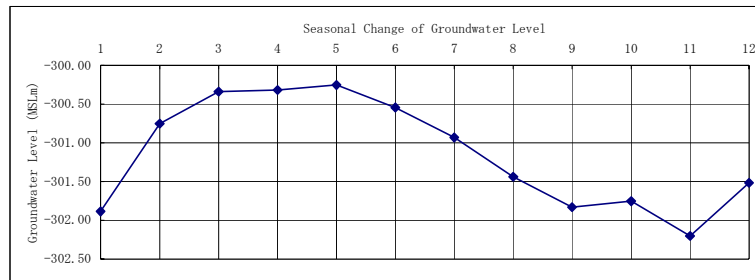
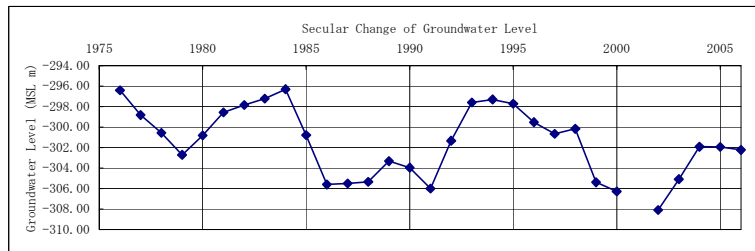
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 GWA_Name_E Alluvium
 LOC_Name_E A1 'Auja
 GR_Governate_E Jericho

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1977	-295.94	-296.77	-295.84	-295.23	-295.53	-296.13	-296.57	-297.27		-297.97	-298.36	-298.71	-296.76
1978	-298.49	-297.97	-297.48	-297.18	-297.59	-297.95	-298.34	-298.78	-299.08	-299.39			-298.23
1979													
1980			-299.66		-298.69								-299.18
1981													
1982													
1983													
1984													
1985									-299.14		-299.80		-299.47
1986	-299.38		-300.27		-300.84		-302.01		-303.10		-303.71		-301.55
1987	-302.10		-300.46		-299.94		-300.47		-302.88		-303.90		-301.63
1988	-304.05		-302.72		-301.71		-300.59		-300.89		-301.11		-301.84
1989	-300.51		-299.02		-298.59		-298.62		-299.30		-299.86		-299.32
1990	-300.08		-299.78		-298.90		-299.62		-301.30		-302.57		-300.37
1991				-302.76		-303.27		-304.11				-304.66	-303.70
1992		-303.72		-301.22		-300.56		-299.60		-299.47		-297.53	-300.35
1993		-296.41		-295.90		-295.57		-295.19		-294.95		-294.53	-295.43
1994		-293.76		-292.98		-293.72		-295.06		-295.95		-296.24	-294.62
1995		-294.11		-293.92		-294.08				-296.12		-296.91	-295.03
1996		-296.83		-296.03		-295.62		-296.40		-297.59		-298.29	-296.79
1997		-298.64		-297.95		-297.41		-297.48		-297.89		-298.48	-297.98
1998		-298.67		-297.70		-297.00		-297.18		-297.95			-297.70
1999		-298.90		-299.20				-302.60				-307.60	-302.08
2000		-303.95		-302.22		-303.84		-304.35					-303.59
2001													
2002										-306.50			-306.50
2003	-307.00		-306.64		-305.42								-306.35
2004		-299.98		-300.00		-300.02		-300.20		-301.30			-300.30
2005		-300.72		-300.25				-299.55		-299.65		-300.37	-300.11
2006		-300.55		-300.07									-300.31
Ave.	-300.15	-298.33	-299.47	-297.81	-298.99	-297.93	-299.46	-299.06	-300.81	-298.51	-300.70	-299.08	-299.74



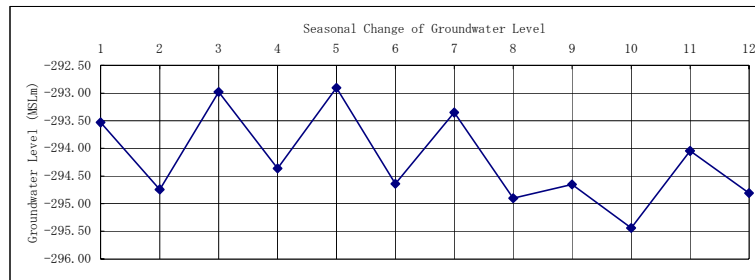
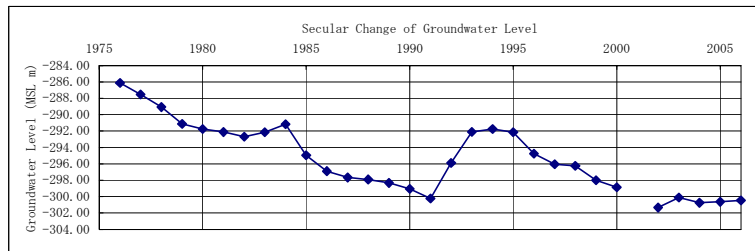
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 GWA_Name_E Alluvium
 LOC_Name_E A1 'Auja
 GR_Governate_E Jericho

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1976		-296.01	-294.77	-294.56	-294.80	-295.34		-296.52	-297.29	-297.83	-298.40	-298.69	-296.42
1977	-298.81	-298.80	-298.24	-297.43	-297.58	-298.09	-298.53	-299.43			-300.54	-300.89	-298.83
1978	-300.42		-299.95	-299.56	-299.79	-300.03	-300.47	-300.94	-301.24	-301.58	-301.80		-300.58
1979	-302.03	-301.72	-301.97	-302.21	-302.53	-302.77	-303.08				-304.18	-303.92	-302.71
1980		-301.55			-301.12		-300.10		-300.16		-301.21		-300.83
1981	-300.04		-299.25		-298.91		-297.36		-297.41		-298.42		-298.57
1982	-299.24		-297.41		-296.65		-297.21		-297.66		-298.93		-297.85
1983	-298.87		-296.97		-296.88		-296.81		-296.54		-296.27		-297.22
1984	-295.98		-293.12		-293.63		-295.41		-299.52		-300.19		-296.31
1985	-300.71		-299.77		-299.85				-302.84				-300.79
1986	-303.71		-304.08		-305.44		-306.49		-307.40		-306.59		-305.62
1987	-304.30		-302.40	-309.61	-302.76		-305.13		-306.97		-307.42		-305.51
1988	-306.30		-304.85		-304.14		-305.10		-305.76		-305.98		-305.36
1989	-304.10		-301.91		-301.28		-302.81		-304.79		-305.14		-303.34
1990	-304.48		-302.75		-302.05		-303.58		-305.13		-305.78		-303.96
1991		-305.27		-304.61		-305.86		-306.94		-307.31		-306.15	-306.02
1992		-304.59		-302.51		-301.85		-300.40		-299.44		-299.24	-301.34
1993		-298.34		-298.14		-297.36		-298.09		-296.93		-296.73	-297.60
1994		-295.98		-295.61		-296.98		-298.34		-298.71		-298.25	-297.31
1995		-296.17		-296.18						-299.14		-299.43	-297.73
1996		-298.81		-297.88		-297.78		-299.45		-301.79		-301.47	-299.53
1997		-301.51		-300.00		-299.69				-300.71		-301.39	-300.66
1998		-300.80		-299.92		-299.31		-299.86		-300.99			-300.18
1999		-302.08		-304.06		-305.25		-308.56		-306.23		-306.21	-305.40
2000		-305.71				-306.16		-306.99					-306.29
2001													
2002										-308.10			-308.10
2003	-307.41		-307.63		-305.61				-302.91	-301.91			-305.10
2004		-300.41		-300.92		-301.12		-301.78		-303.41		-303.92	-301.93
2005		-302.21		-300.49				-301.40		-302.21		-303.42	-301.95
2006		-302.81		-301.68									-302.25
Ave.	-301.89	-300.75	-300.34	-300.32	-300.25	-300.54	-300.93	-301.44	-301.83	-301.75	-302.20	-301.52	-301.51



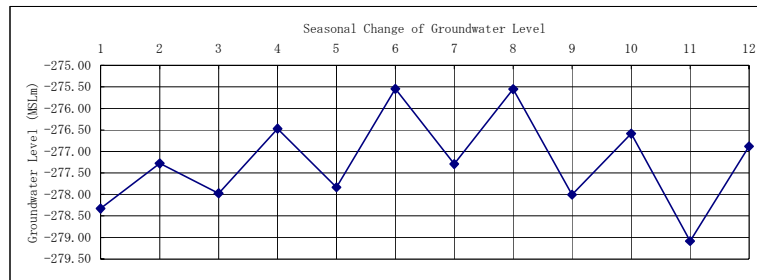
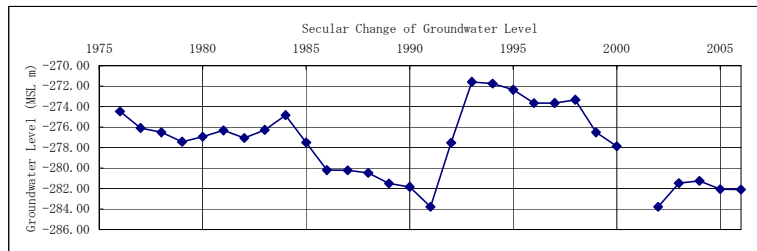
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 GWA_Name_E Alluvium
 LOC_Name_E Fasayil
 GR_Governate_E Jericho

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1976	-285.48	-285.68	-285.53	-286.16	-285.86			-285.95	-286.23	-286.51	-286.63	-287.17	-286.12
1977	-286.89	-287.23	-287.00	-287.17	-287.28	-287.46	-287.61	-287.84	-287.84	-288.21	-288.42	-288.42	-287.54
1978	-288.35	-288.56	-288.60	-288.98	-288.75	-288.92	-289.09	-289.37	-289.63	-289.53	-290.07	-289.08	-289.08
1979	-289.93	-289.95	-290.08	-291.23	-290.47	-291.26	-291.20		-292.40		-292.56	-292.14	-291.12
1980				-291.31			-291.40		-291.91		-292.35		-291.74
1981	-292.02		-291.73		-291.85		-292.08		-292.45		-292.56		-292.12
1982	-292.74		-292.50		-292.75		-292.82		-292.40		-292.88		-292.68
1983	-292.60		-291.40		-292.31		-292.07		-292.24		-292.16		-292.13
1984	-291.90		-288.37		-289.95		-289.19		-293.63		-293.91		-291.16
1985	-294.15		-294.27		-294.88		-294.89		-295.58		-296.00		-294.96
1986	-296.08		-296.24		-296.59		-297.15		-297.72		-297.54		-296.89
1987	-296.74		-296.38		-297.38		-298.20		-298.72		-298.57		-297.67
1988	-298.01		-297.20		-297.25			-297.85	-298.65		-298.51		-297.91
1989	-298.00		-297.25		-298.17		-298.65		-299.02		-298.85		-298.32
1990	-298.67		-297.98		-298.76		-299.20		-299.75		-299.90		-299.04
1991		-299.75		-299.30		-300.83		-300.21		-300.88		-300.33	-300.22
1992		-298.40		-296.07		-295.67		-295.27		-295.11		-294.73	-295.88
1993		-292.66		-292.24		-292.06		-291.87		-292.02		-291.78	-292.10
1994		-291.38		-291.21		-291.47		-291.93		-292.48		-292.00	-291.75
1995		-291.33		-291.26		-291.72		-292.24		-292.88		-293.37	-292.13
1996		-293.70		-293.64		-294.30		-294.98		-295.88		-296.07	-294.76
1997		-295.64		-295.41		-295.99				-296.64		-296.56	-296.05
1998				-295.53		-296.13		-296.37		-296.93			-296.24
1999		-296.30		-296.74				-298.07		-299.87		-298.97	-297.99
2000		-298.68		-298.38		-299.00		-299.41					-298.87
2001													
2002		-300.88									-301.79		-301.34
2003	-301.40		-300.15			-299.40			-299.45				-300.10
2004		-298.94		-300.00		-300.77		-301.25		-301.77		-301.70	-300.74
2005		-300.95		-300.58				-300.93		-301.45		-299.28	-300.64
2006		-300.60		-300.30									-300.45
Ave.	-293.53	-294.74	-292.98	-294.36	-292.90	-294.64	-293.35	-294.90	-294.65	-295.44	-294.05	-294.81	-295.26



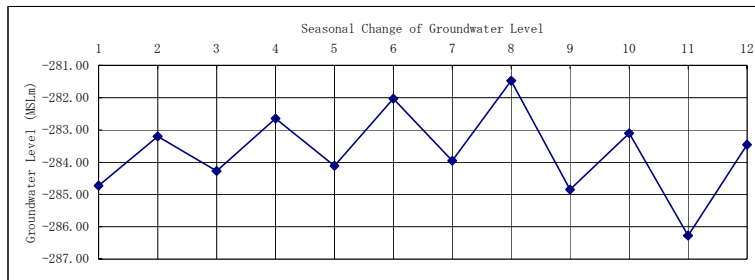
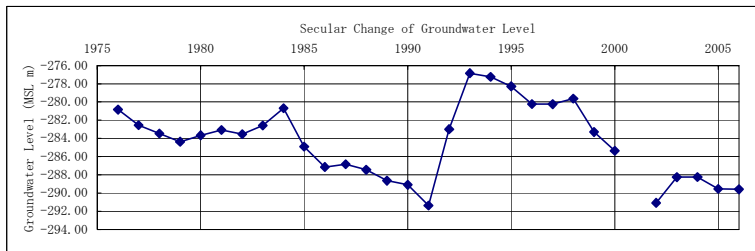
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 GR_Governate_E Jericho

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1976	-274.06	-274.11	-273.86	-274.23	-274.60				-274.46	-274.87	-275.09	-275.09	-274.49
1977	-275.24	-275.87	-276.13		-276.37	-275.72	-275.43	-275.97		-276.66	-276.77	-276.77	-276.09
1978	-276.23	-276.48	-276.88	-277.09	-276.73	-276.25	-276.10	-276.41	-276.81	-276.40	-276.40		-276.53
1979	-277.05	-277.33	-277.53	-277.48	-277.34	-277.02	-276.93		-277.17		-278.30	-278.20	-277.43
1980		-277.26			-276.88				-276.28		-277.38		-276.95
1981	-276.81		-276.36		-276.05		-275.45		-275.62		-277.77		-276.34
1982			-277.24				-276.60				-277.37		-277.07
1983	-276.65				-276.57		-275.66	-276.03		-276.47			-276.28
1984			-274.85		-274.23		-273.72		-275.00	-276.41			-274.84
1985	-277.14		-277.27		-277.57		-276.85		-277.12		-279.16		-277.52
1986	-281.81		-280.23		-279.78		-278.97		-279.80		-280.67		-280.21
1987	-279.93		-279.80		-280.06		-279.50		-280.32		-281.80		-280.23
1988	-281.43		-280.45		-280.26		-278.39		-280.27		-282.11		-280.49
1989	-281.30		-281.45		-281.77		-280.49		-281.53		-282.55		-281.51
1990	-282.30		-281.58		-281.47		-280.71		-281.65		-283.35		-281.84
1991		-283.46		-283.75		-284.22		-282.65		-284.60		-284.14	-283.80
1992		-282.96		-280.18		-277.72		-275.41		-274.92		-274.03	-277.54
1993				-271.97		-271.12		-270.83		-272.04		-272.01	-271.59
1994		-271.14		-271.04		-271.33		-271.54		-272.96		-272.59	-271.77
1995		-271.84		-271.76		-271.52		-271.84		-273.55		-273.69	-272.37
1996		-272.93		-272.85		-272.83		-273.00		-275.00		-275.39	-273.67
1997		-274.44		-273.46		-272.94		-272.70		-274.28		-274.11	-273.65
1998		-272.97		-272.47		-272.23		-272.35		-274.48		-275.53	-273.34
1999		-274.95		-275.89		-276.00		-275.75		-277.85		-278.72	-276.53
2000		-278.19				-278.00		-277.47					-277.89
2001													
2002												-283.80	-283.80
2003		-282.94							-280.02				-281.48
2004		-280.60		-280.71		-280.72		-280.68		-282.11		-282.75	-281.26
2005		-281.55		-281.95				-281.12		-282.49		-283.30	-282.08
2006		-282.00		-282.20									-282.10
Ave.	-278.33	-277.28	-277.97	-276.47	-277.83	-275.54	-277.29	-275.55	-278.01	-276.59	-279.09	-276.88	-277.69



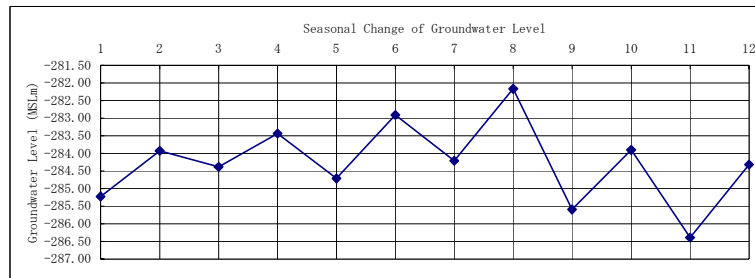
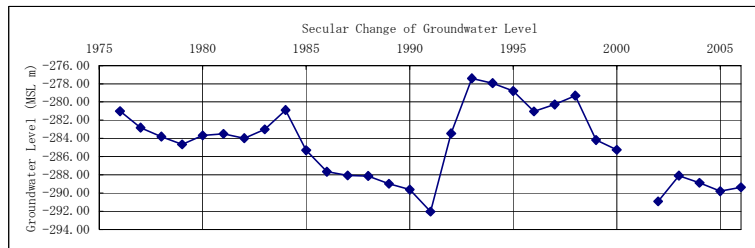
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 GWA_Name_E Eocene
 LOC_Name_E Al Jiftlik
 GR_Governate_E Jericho

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1976	-280.20	-280.10	-279.87	-280.40	-281.01	-280.46		-280.60	-281.15	-281.69	-281.98	-281.75	-280.84
1977	-281.94	-282.40	-282.47		-283.01	-282.24	-281.98	-282.55		-283.29	-282.41	-283.30	-282.56
1978	-282.75	-283.34	-283.53	-283.92	-283.52	-282.92	-282.84	-283.15	-283.63	-284.29	-284.20		-283.46
1979	-283.94	-284.21	-284.27	-284.22	-284.20	-283.85	-283.91		-284.24		-285.60	-285.28	-284.37
1980			-283.85				-282.97		-283.16		-284.66		-283.66
1981	-283.47		-283.14		-282.76		-282.04		-282.63		-284.39		-283.07
1982	-284.60		-283.23		-283.56		-282.90		-282.79		-284.10		-283.53
1983	-283.23		-282.80		-282.48		-281.67		-282.00		-283.35		-282.59
1984	-282.42		-279.15		-278.56		-278.24		-282.07		-283.69		-280.69
1985			-284.40		-284.67		-283.79				-286.77		-284.91
1986	-286.67		-287.62		-286.95		-286.42		-287.36		-287.87		-287.15
1987	-286.96		-286.83				-286.70						-286.83
1988	-288.02		-286.58		-285.36		-286.56		-288.28		-289.94		-287.46
1989	-288.09		-288.05		-288.70		-287.52		-289.21		-290.34		-288.65
1990	-289.12		-288.31		-288.64		-287.80		-289.46		-291.27		-289.10
1991		-291.96		-291.41		-290.49		-289.92		-292.39		-292.02	-291.37
1992		-289.66		-285.74		-282.78		-280.12		-280.12		-279.59	-283.00
1993		-277.42		-276.83		-275.84		-275.50		-277.76		-277.70	-276.84
1994		-276.35		-276.48		-276.64		-277.16		-278.34		-278.51	-277.25
1995		-277.24		-277.21		-277.24		-277.82		-280.41		-279.83	-278.29
1996		-279.03		-278.92		-279.15		-279.56		-282.13		-282.53	-280.22
1997		-281.08		-279.66		-279.26		-279.10		-281.65		-280.75	-280.25
1998		-279.23		-277.77		-278.12		-278.68		-281.85		-282.18	-279.64
1999		-281.40		-282.94		-283.00		-283.25		-285.95			-283.31
2000		-285.48		-285.20		-285.52		-285.27					-285.37
2001													
2002												-291.08	-291.08
2003		-290.01				-287.19			-287.08		-288.76		-288.26
2004		-286.32				-287.80						-290.60	-288.24
2005		-289.20		-289.35				-287.89		-290.40		-290.85	-289.54
2006				-289.60									-289.60
Ave.	-284.72	-283.20	-284.27	-282.64	-284.11	-282.03	-283.95	-281.47	-284.85	-283.10	-286.28	-283.45	-284.37



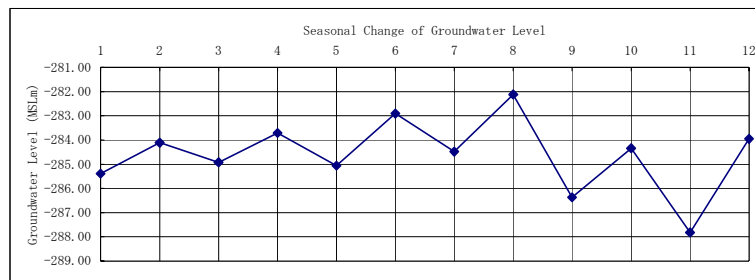
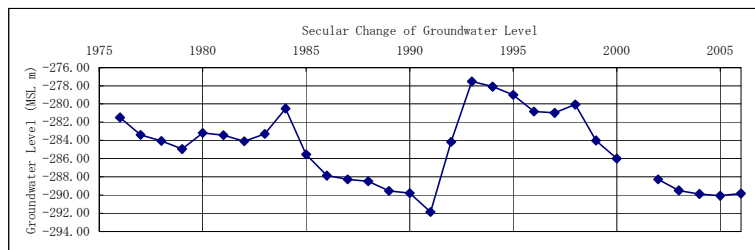
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 LOC_Name_E Al Jiftlik
 GR_Governate_E Jericho

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1977	-281.95	-282.30	-282.48	-283.17	-283.11	-282.67	-282.48	-282.80			-283.63	-283.64	-282.82
1978		-283.39	-283.63	-283.96	-283.86	-283.42	-283.42	-283.52	-283.89	-284.42	-284.48		-283.80
1979	-284.27	-284.52	-284.64	-284.64	-284.64	-284.39	-284.38		-284.64		-285.79		-284.66
1980			-283.17		-283.51		-283.30		-283.51		-284.86		-283.67
1981	-284.10		-283.33		-283.21		-282.64		-283.10		-284.70		-283.51
1982	-284.80		-283.70		-284.11		-283.60		-283.23		-284.46		-283.98
1983	-283.80		-283.35		-282.77		-282.14		-282.42		-283.55		-283.00
1984	-282.77		-279.02		-278.49		-278.39		-282.60		-284.05		-280.89
1985	-284.73		-284.64		-284.90				-285.38		-286.92		-285.31
1986	-287.08		-287.74		-287.52		-287.14		-287.92		-288.60		-287.67
1987	-287.36		-286.89		-287.96		-287.45		-288.98		-289.73		-288.06
1988	-288.39		-286.71		-287.48		-287.32		-288.64		-290.20		-288.13
1989	-288.46		-287.92		-288.98		-288.26		-289.55		-290.71		-288.98
1990	-289.63		-288.36		-288.98				-291.55				-289.63
1991		-291.54		-291.73						-292.65		-292.30	-292.06
1992		-289.73		-285.46		-282.58				-280.17		-279.33	-283.45
1993		-277.58		-276.89				-276.21		-278.17		-278.14	-277.40
1994		-276.83		-276.95		-277.36		-277.83		-279.71		-278.90	-277.93
1995		-277.74		-277.55		-277.98		-278.55		-280.70		-280.30	-278.80
1996		-279.46		-279.29				-280.74		-282.68		-283.05	-281.05
1997		-280.67		-279.92						-281.52		-278.99	-280.28
1998		-278.76		-278.15				-278.74		-281.58			-279.31
1999		-281.38		-283.80		-283.21				-285.80		-286.70	-284.18
2000		-285.35		-285.17									-285.26
2001													
2002		-289.70									-292.13		-290.91
2003		-290.43		-287.64		-287.95		-286.60	-287.14			-288.83	-288.10
2004		-286.33		-288.10		-288.57		-289.17		-290.48		-290.64	-288.88
2005		-289.19		-289.26				-288.67		-290.91		-291.01	-289.81
2006		-289.19		-289.54									-289.37
Ave.	-285.23	-283.93	-284.38	-283.43	-284.71	-282.91	-284.21	-282.16	-285.60	-283.90	-286.39	-284.32	-284.73



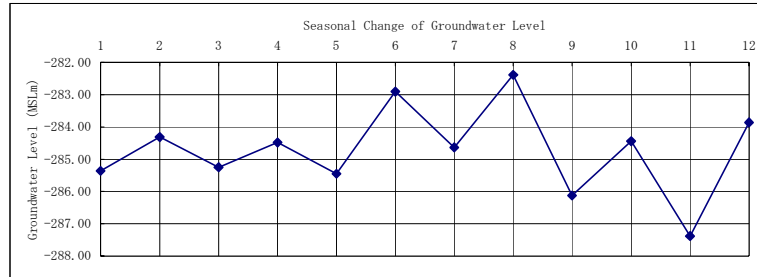
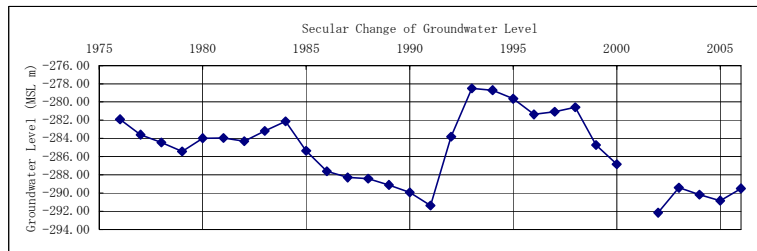
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 LOC_Name_E Al Jiftlik
 GR_Governate_E Jericho

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1977	-282.50	-283.46	-283.45		-283.80	-282.95	-282.43	-283.31		-283.97	-284.05	-284.08	-283.40
1978	-283.46	-284.12			-284.17	-283.52	-283.40	-283.86		-285.08	-284.90		-284.06
1979	-284.66	-284.94	-285.08	-284.96	-283.99	-284.39	-284.39		-284.95		-286.37	-285.85	-284.95
1980			-281.67		-284.23		-283.64						-283.18
1981	-284.08		-283.81		-283.39		-282.59		-283.33				-283.44
1982	-285.00		-283.86		-284.17		-283.41		-283.45		-284.77		-284.11
1983	-283.85		-283.49		-283.17		-282.28		-282.79		-284.23		-283.30
1984	-283.05		-279.63		-278.83		-278.48		-282.53				-280.50
1985	-285.14		-285.11		-285.53		-284.49		-285.44		-287.50		-285.53
1986	-287.39		-288.22		-287.65		-286.88		-288.18		-288.95		-287.87
1987	-287.70		-287.59		-288.18		-287.21		-288.90		-290.16		-288.29
1988	-288.83		-287.49		-288.12		-287.09		-288.86		-290.61		-288.50
1989	-289.01		-289.88		-289.49		-288.15		-289.83		-290.95		-289.55
1990	-290.01		-289.11		-289.44		-288.37		-290.05		-291.85		-289.80
1991		-291.73		-292.05		-291.08		-290.50		-293.10		-292.75	-291.86
1992		-290.58		-287.11		-283.93		-281.17		-281.21		-281.01	-284.16
1993		-278.30		-277.87		-276.57		-276.11		-278.47		-277.95	-277.54
1994		-277.17		-277.10		-277.32		-277.75		-279.97		-279.34	-278.10
1995		-278.05		-278.02		-277.82		-278.47		-281.08		-280.55	-278.99
1996		-279.74		-279.62		-279.67		-279.92		-282.82		-283.23	-280.83
1997		-281.76		-280.65		-280.00		-279.70		-281.92		-281.92	-280.99
1998		-280.17		-279.19		-278.77		-279.08				-283.14	-280.07
1999		-282.33		-283.50		-283.98		-283.67		-284.30		-286.31	-284.01
2000		-286.23		-286.00		-286.11		-285.64					-285.99
2001													
2002		-283.94									-292.61		-288.27
2003		-290.97		-289.65		-288.89			-288.15		-289.87		-289.50
2004				-288.68		-288.65				-290.90		-291.35	-289.89
2005		-289.95		-290.05				-289.20		-291.15			-290.08
2006		-289.85											-289.85
Ave.	-285.39	-284.11	-284.92	-283.71	-285.06	-282.91	-284.48	-282.12	-286.37	-284.34	-287.82	-283.95	-284.94



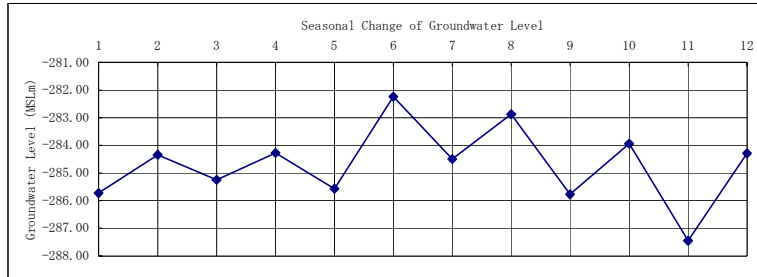
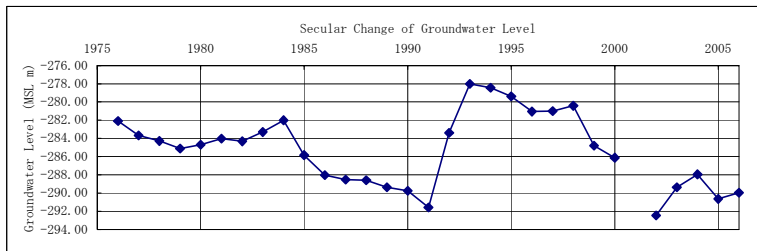
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 LOC_Name_E Al Jiftlik
 GR_Governate_E Jericho

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1976	-280.88	-280.74	-281.02	-282.11	-281.49	-281.41		-281.62	-282.40	-283.05	-283.47	-282.74	-281.90
1977	-282.47	-283.37	-283.31	-284.15	-283.59	-283.23	-283.10	-283.47		-284.12	-283.88	-284.85	-283.59
1978	-283.67	-284.04	-284.87	-284.71	-284.60	-283.73	-284.20	-283.76	-284.38	-285.97	-285.00		-284.45
1979	-285.58	-286.14	-285.38	-285.13	-285.03	-285.00	-284.60		-285.30		-286.71	-285.60	-285.45
1980		-280.77			-284.73		-283.88		-285.38		-285.15		-283.98
1981	-283.94		-284.18		-284.21		-282.71		-283.60		-285.11		-283.96
1982	-285.31		-284.16		-284.39		-283.37		-283.77		-284.90		-284.32
1983	-283.70		-282.85		-283.05		-282.21		-283.02		-284.25		-283.18
1984	-283.53		-281.13		-280.28		-280.06		-283.31		-284.53		-282.14
1985	-284.95		-284.95		-285.15		-284.35		-285.31		-287.45		-285.36
1986	-286.93		-288.13		-287.24		-286.67		-288.12		-288.56		-287.61
1987	-287.46		-287.72		-287.82		-286.95		-289.28		-290.57		-288.30
1988	-288.40		-287.49		-287.75		-286.87		-289.54		-290.53		-288.43
1989	-288.40		-288.90		-289.02		-287.82		-289.74		-290.83		-289.12
1990	-289.89		-289.38		-288.88		-288.07		-290.99		-292.46		-289.95
1991		-291.13		-292.38		-290.62							-291.38
1992		-289.73		-286.87		-283.16		-280.77		-282.16		-280.30	-283.83
1993		-279.26		-279.03		-277.69		-276.53		-279.42		-279.13	-278.51
1994		-277.62		-278.47		-277.48		-278.42		-280.90		-279.35	-278.71
1995		-278.11		-279.11		-278.19		-279.33		-282.52		-280.65	-279.65
1996		-280.15		-280.34		-280.00		-280.33		-284.46		-282.97	-281.37
1997		-281.75		-281.16		-279.98		-280.02		-282.33		-281.28	-281.09
1998		-279.50		-279.35		-278.82		-280.08		-283.06		-282.75	-280.59
1999		-282.45		-284.90		-283.43		-283.62		-286.75		-287.28	-284.74
2000		-286.52		-288.17		-286.40		-286.27					-286.84
2001													
2002												-292.17	-292.17
2003		-291.42			-290.04	-287.97			-287.75		-289.96		-289.43
2004		-289.65		-289.65		-289.31		-289.51		-291.16		-291.85	-290.19
2005		-290.20		-291.10				-289.65		-291.85		-291.40	-290.84
2006		-289.40		-289.60									-289.50
Ave.	-285.37	-284.31	-285.25	-284.48	-285.45	-282.90	-284.63	-282.38	-286.13	-284.44	-287.38	-283.86	-285.35



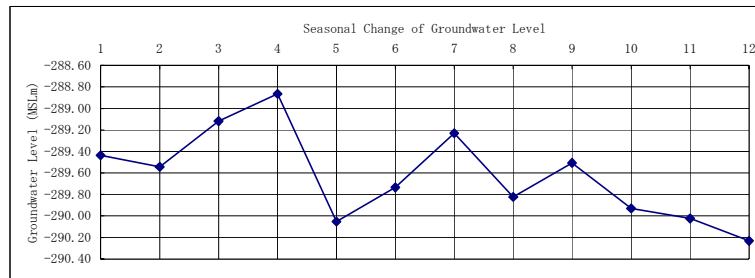
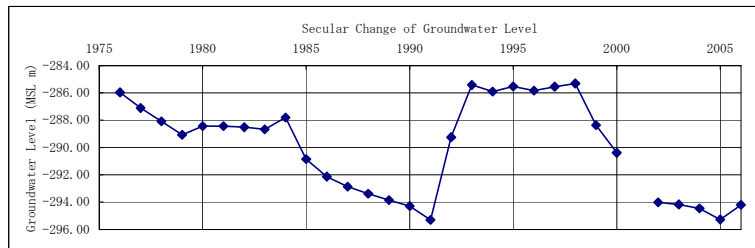
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1976	-281.00	-280.84	-280.78	-281.90	-284.53	-281.88	-281.32		-282.30	-282.75	-283.28	-282.46	-282.09
1977	-282.55	-283.36	-283.54	-284.41	-283.80	-282.95	-283.28	-283.92		-284.05	-284.14	-284.57	-283.69
1978	-283.50	-284.11	-284.97	-285.22	-284.15	-283.58	-283.75	-284.01	-284.69		-284.91		-284.29
1979	-284.64	-284.97	-285.17	-285.08	-285.38	-284.55	-285.04		-284.99		-286.31		-285.12
1980					-285.09		-283.73		-284.06		-285.87		-284.69
1981	-284.07		-283.96		-284.06		-282.62		-284.31		-285.22		-284.04
1982	-285.81		-283.92		-284.25		-283.44		-283.76		-284.76		-284.32
1983	-283.86		-282.75		-283.25		-283.34		-283.05		-284.59		-283.30
1984	-283.27		-281.01		-280.17		-279.94		-282.92		-284.77		-282.01
1985	-285.68		-285.14		-285.38				-285.42		-287.57		-285.84
1986	-287.65		-288.77		-287.47		-286.80		-288.36		-289.16		-288.03
1987	-287.59		-287.63		-288.70		-287.16		-289.73		-290.39		-288.53
1988	-288.73		-287.52		-288.53		-287.07		-289.13		-290.60		-288.59
1989	-288.76		-289.00		-289.44		-288.08		-290.06		-290.90		-289.37
1990	-289.94		-289.33		-289.31		-288.32				-291.96		-289.77
1991		-291.53		-292.40		-291.03		-290.42				-292.55	-291.58
1992		-290.35				-283.72		-281.19		-281.59		-280.15	-283.40
1993		-278.66		-278.32		-276.76		-276.40		-279.26		-278.68	-278.01
1994		-277.34		-277.89		-277.45		-278.05		-280.62		-279.33	-278.44
1995		-278.38		-278.49		-278.02		-279.29		-281.50		-280.62	-279.38
1996		-279.93		-279.83		-279.85		-280.32		-283.27		-283.13	-281.05
1997		-281.73		-280.76		-279.96		-280.02		-282.19		-281.36	-281.00
1998		-279.68		-279.20		-278.85		-279.39		-282.53		-282.91	-280.42
1999		-282.37		-283.92		-283.76				-286.74		-287.29	-284.81
2000		-286.12		-286.55		-286.01		-285.84					-286.13
2001													
2002											-292.48		-292.48
2003		-290.89		-289.42		-288.67			-288.06		-289.82		-289.37
2004	-288.86	-287.82		-288.87		-278.74		-289.22		-290.92		-291.22	-287.95
2005		-290.20		-290.32				-289.32		-291.90		-291.52	-290.65
2006		-289.82		-290.12									-289.97
Ave.	-285.73	-284.34	-285.25	-284.27	-285.57	-282.23	-284.49	-282.87	-285.77	-283.94	-287.45	-284.29	-285.28



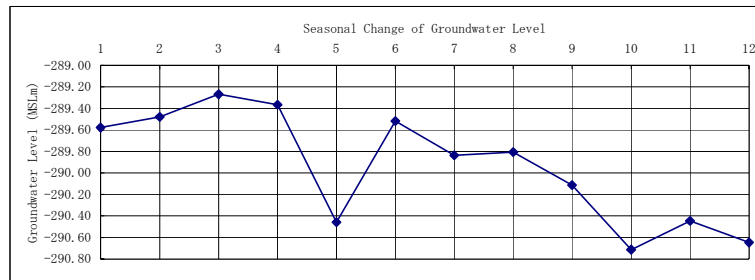
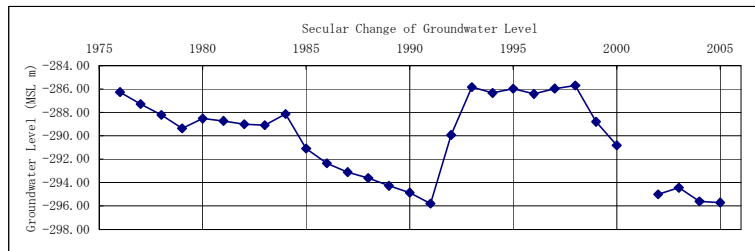
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1976	-285.50	-285.73	-285.68	-285.91	-286.40				-285.64	-286.29	-286.61		-285.97
1977	-286.19	-286.97	-287.29	-287.16	-287.00		-286.50	-286.60	-287.06	-287.60	-287.81	-288.02	-287.11
1978	-287.66		-287.75	-288.08	-288.36	-288.16	-287.70	-287.60	-287.90	-288.42	-288.60	-288.74	-288.09
1979	-288.39	-288.79	-288.90	-288.75	-289.07	-288.97	-288.83		-289.13	-289.55	-289.78	-289.62	-289.07
1980	-289.05	-288.65	-288.02	-287.82	-288.07	-287.94	-287.76		-288.15	-288.99	-289.26	-289.21	-288.45
1981	-288.67	-287.97	-287.80	-288.16	-288.84	-288.90	-288.66	-288.37		-288.56		-288.50	-288.44
1982	-288.72	-288.56	-288.17	-288.03					-288.92	-288.70	-288.66	-288.36	-288.52
1983	-287.93		-287.75	-288.28	-289.54	-290.03	-289.67	-289.45	-288.62	-288.35	-287.95	-287.80	-288.67
1984	-288.25	-288.19	-288.44	-286.40	-286.87	-287.05	-287.09	-287.12	-288.67	-288.45	-288.52	-288.60	-287.80
1985	-288.97	-289.17	-289.31	-290.33	-291.31	-291.32		-291.56	-291.92	-291.91	-291.83	-291.67	-290.85
1986	-291.71	-291.38	-291.39		-292.36		-292.09	-292.01		-292.75	-292.97	-292.48	-292.13
1987	-292.23	-291.88	-291.77	-292.34	-292.79	-293.17	-292.99	-292.94	-293.49	-293.84	-293.63	-293.45	-292.88
1988	-293.03	-292.65	-292.51		-294.05	-294.25	-293.64	-293.34	-293.02	-293.64	-293.56	-293.52	-293.38
1989	-293.14	-292.81	-292.82	-294.23		-294.45	-293.91	-293.62	-294.04	-294.53	-294.43	-294.38	-293.85
1990	-293.76		-293.58	-293.73	-294.33	-294.42	-293.99	-293.72	-294.75	-294.97	-294.91	-295.03	-294.29
1991	-294.93	-294.41	-294.46	-294.96	-295.66	-295.64		-295.11	-295.88	-296.16	-295.88		-295.31
1992	-294.78	-293.84	-291.84	-290.43	-289.43	-288.64	-287.53	-286.73	-287.02	-286.92	-286.91	-286.90	-289.25
1993	-285.91	-285.33	-285.10	-285.41	-285.49	-285.09		-285.23	-285.62	-285.59	-285.51	-285.39	-285.42
1994	-285.20	-284.97		-285.51	-286.06	-286.07	-285.81	-285.86	-286.70	-286.65	-286.39	-285.76	-285.91
1995	-285.51	-285.17	-285.28	-285.54		-286.07	-285.24	-285.21		-285.69	-286.12		-285.54
1996		-285.56	-285.58	-285.56	-286.10	-285.96	-285.60		-286.53				-285.84
1997								-285.35	-285.66	-285.81	-285.58	-285.34	-285.55
1998	-285.18	-285.21	-284.81	-285.27	-285.64	-285.46	-285.31	-285.59					-285.31
1999	-286.66	-286.70	-287.11	-287.72	-288.47	-288.31	-288.09	-288.69	-289.32	-289.62	-290.06	-289.74	-288.37
2000	-289.56	-289.48	-289.61	-290.28	-290.75	-290.46	-290.65	-291.15	-291.58				-290.39
2001													
2002												-294.01	-294.01
2003	-295.56	-293.31		-293.98	-294.66		-293.53					-293.98	-294.17
2004		-293.18			-294.46	-294.06		-295.02		-295.40		-294.62	-294.46
2005		-294.10			-295.58			-295.85			-295.56		-295.27
2006		-294.56	-293.86										-294.21
Ave.	-289.44	-289.54	-289.12	-288.86	-290.05	-289.73	-289.23	-289.82	-289.51	-289.93	-290.02	-290.23	-289.95



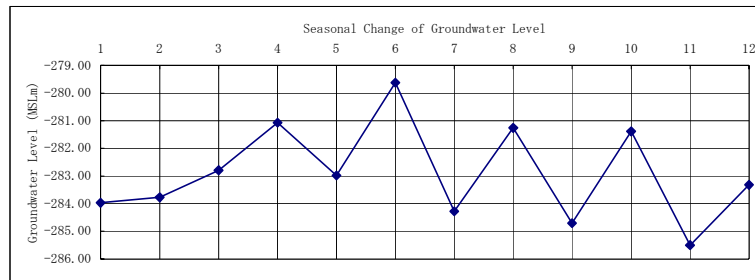
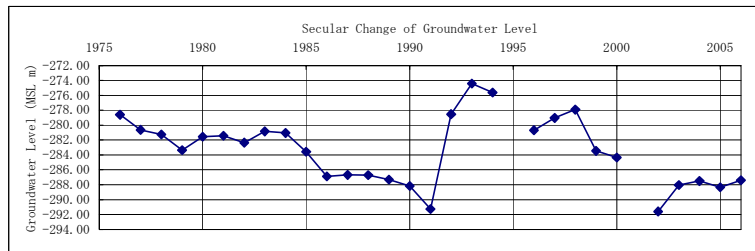
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1976	-285.77	-285.94		-286.23	-286.65				-285.92	-286.55	-286.86		-286.27
1977	-286.42		-287.52	-287.37		-287.21	-286.86	-286.81		-287.77	-287.29	-288.32	-287.28
1978	-287.59	-287.91	-288.02		-288.53	-288.36	-287.92	-287.79			-288.86	-289.04	-288.22
1979		-289.06		-289.00	-289.34	-289.21	-289.07				-290.05	-289.89	-289.37
1980	-289.32		-288.28	-288.07	-288.32	-288.17	-288.00	-287.87	-288.41		-289.39	-289.49	-288.53
1981	-288.91	-288.19	-288.06	-288.47	-289.07	-289.13	-288.89	-288.60		-289.21		-288.79	-288.73
1982		-288.79	-288.43		-289.03	-289.56	-289.59		-289.15			-288.59	-289.02
1983	-288.21			-288.49	-289.80	-290.27	-289.89	-289.67	-288.85	-288.62		-288.08	-289.09
1984	-288.54	-288.43	-288.77	-286.83	-287.23	-287.44	-287.48	-287.47	-288.94	-288.71	-288.99	-288.87	-288.14
1985	-289.27	-289.45	-289.57	-290.62	-291.47	-291.78		-291.77	-292.15	-291.98	-292.11	-291.91	-291.10
1986	-291.93		-291.64		-292.56		-292.31	-292.25		-293.02		-292.74	-292.35
1987	-292.47	-292.12	-292.01	-292.58	-293.07		-293.19	-293.14	-293.72	-294.10	-293.90	-293.92	-293.11
1988	-293.29	-292.89	-292.76		-294.29	-294.50	-293.85	-293.54	-293.27	-293.82	-293.83	-293.77	-293.62
1989	-293.49	-293.20		-294.66		-294.83	-294.27	-294.00	-294.46		-294.83	-294.75	-294.27
1990	-294.16		-293.97	-294.14	-294.73	-294.80	-294.36	-294.09	-295.14	-295.32	-296.24	-296.43	-294.85
1991	-295.32	-294.78	-294.81	-295.37	-296.10	-296.02	-295.63	-295.52	-296.36	-296.71	-297.07		-295.79
1992	-295.85	-294.21	-292.21	-290.81	-289.81	-289.28	-287.91	-287.15	-287.42		-287.34	-287.27	-289.93
1993	-286.34	-285.73	-285.54	-285.87	-285.92	-285.49		-285.69	-286.05		-285.95	-285.83	-285.84
1994	-285.66	-285.41		-285.96	-286.54	-286.49	-286.21	-286.33	-287.15	-287.08	-286.84	-286.19	-286.35
1995	-285.98	-285.60	-285.73	-285.93		-286.51	-285.68	-285.68		-286.21	-286.57		-285.98
1996		-286.01	-286.03	-287.04		-286.41	-286.05		-287.04				-286.43
1997								-285.78	-286.09	-286.23	-286.03	-285.75	-285.97
1998	-285.58	-285.40	-285.24	-285.69	-286.09	-285.89		-286.09					-285.71
1999	-287.11	-287.12	-287.51	-288.15	-288.94	-289.05	-288.49	-289.13	-289.84	-290.01	-290.24	-290.17	-288.81
2000	-289.99	-289.86	-290.04	-290.72	-291.12		-291.12	-291.60	-292.12				-290.82
2001													
2002												-295.01	-295.01
2003		-294.29		-294.71								-294.32	-294.44
2004					-295.29			-295.83		-296.13		-295.18	-295.60
2005		-294.71			-296.25						-296.16		-295.70
2006													
Ave.	-289.58	-289.48	-289.27	-289.36	-290.46	-289.52	-289.84	-289.81	-290.11	-290.71	-290.45	-290.65	-290.22



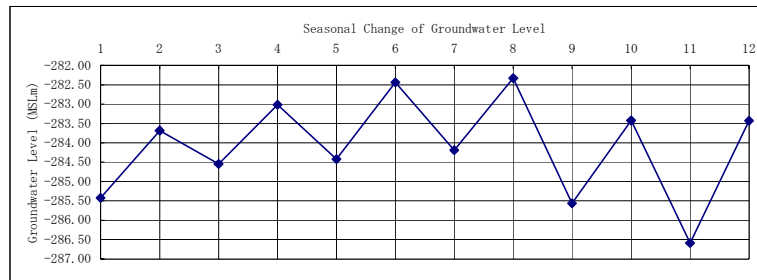
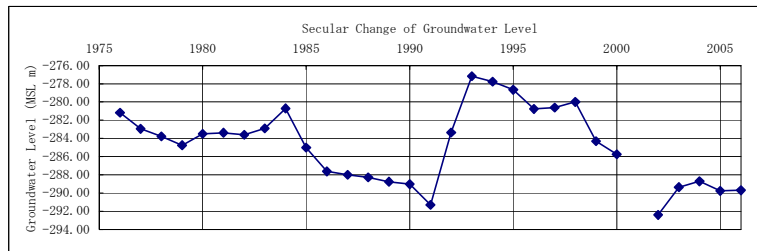
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 GR_Governate_E Jericho

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1976		-277.83	-277.32	-277.20	-277.95	-278.39		-278.90		-279.81	-280.08	-280.00	-278.61
1977	-279.74	-279.55	-279.60		-280.26	-280.90	-281.00	-281.18			-281.70	-281.78	-280.63
1978	-281.03	-280.61	-280.94		-281.75	-281.88							-281.24
1979					-282.91	-283.15	-283.36		-283.33		-283.99		-283.35
1980					-280.76		-281.22				-281.70		-281.55
1981			-280.84		-280.61				-281.54		-282.70		-281.42
1982	-282.80		-281.56		-281.86						-283.20		-282.35
1983	-281.94		-281.20		-279.82				-280.42				-280.84
1984	-281.31		-280.00				-280.66		-281.10		-282.22		-281.06
1985	-282.84		-282.39		-283.45		-283.69		-283.94		-285.12		-283.57
1986	-285.73		-285.69		-286.07		-286.24		-288.80		-288.82		-286.89
1987	-286.55		-285.00		-286.29		-286.96		-288.63				-286.68
1988	-286.96		-284.47		-285.41				-287.76		-288.91		-286.70
1989	-286.73		-285.01		-287.16		-287.42		-288.15		-289.45		-287.32
1990	-288.08		-286.13		-287.49		-287.96				-291.21		-288.17
1991		-291.55		-290.47				-291.18		-291.78		-291.42	-291.28
1992				-281.39		-278.92		-276.79		-277.01			-278.52
1993		-274.46		-273.52		-273.20		-273.86		-275.48		-275.99	-274.42
1994				-273.80		-275.40				-277.73			-275.64
1995													
1996								-279.11		-280.98		-281.94	-280.67
1997				-277.61		-277.97		-279.84		-280.06		-279.77	-279.05
1998				-273.87		-276.02		-278.09		-280.16		-281.48	-277.92
1999				-280.97		-281.54						-287.89	-283.46
2000				-284.34									-284.34
2001													
2002											-291.60		-291.60
2003		-290.33	-288.94			-288.52		-286.05	-286.44				-288.05
2004				-285.38				-287.62		-289.49			-287.49
2005		-287.94		-287.43							-289.64		-288.33
2006		-287.94		-286.89									-287.41
Ave.	-283.97	-283.77	-282.79	-281.07	-282.98	-279.62	-284.28	-281.26	-284.71	-281.39	-285.50	-283.32	-283.40



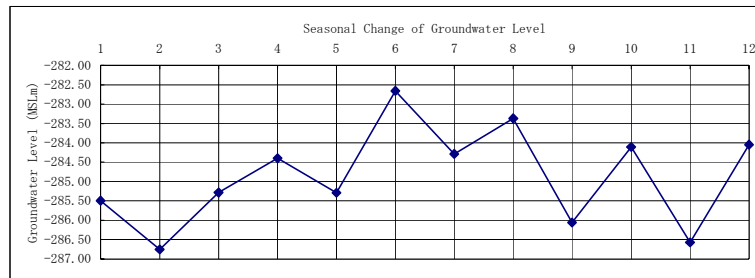
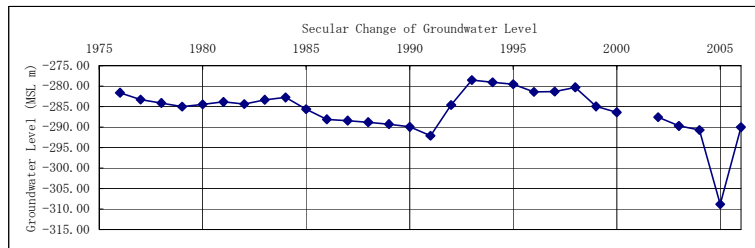
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 GWA_Name_E Alluvium
 LOC_Name_E Al Jiftlik
 GR_Governate_E Jericho

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1976	-280.48	-280.47	-280.21	-280.75	-281.39	-280.82		-280.95	-281.52	-282.04	-282.32	-282.09	-281.19
1977	-281.97	-282.70	-282.78		-283.29	-282.67	-282.36	-282.88		-283.57	-283.73	-283.63	-282.96
1978	-283.09	-283.60	-283.84	-284.16	-283.84	-283.25	-283.15	-283.49	-284.01	-284.69	-284.49		-283.78
1979		-284.53	-284.67	-284.63	-284.49	-284.22	-284.18		-284.56		-285.94	-285.58	-284.76
1980			-284.09		-282.77		-282.27		-283.45		-284.93		-283.50
1981	-283.75		-283.26		-283.00		-282.34				-284.60		-283.39
1982	-283.57		-283.46		-283.79		-283.25		-283.16		-284.42		-283.61
1983	-283.55		-283.12		-282.77		-282.02		-282.35		-283.65		-282.91
1984	-282.69		-279.03		-278.36		-278.08		-282.12		-283.98		-280.71
1985	-284.68		-284.63		-284.90		-284.04		-284.67		-287.12		-285.01
1986	-287.00		-288.02		-287.31		-286.81		-288.13		-288.52		-287.63
1987	-287.27		-287.10		-287.90		-287.04		-288.84		-289.89		-288.01
1988	-288.42		-286.95				-286.94		-288.69		-290.34		-288.27
1989	-288.45		-288.37		-289.10		-287.93		-288.84		-289.89		-288.76
1990	-289.51		-288.65		-289.01		-288.22		-289.81				-289.04
1991		-291.40				-290.88		-290.35		-292.60			-291.31
1992		-290.03		-286.03		-283.07		-280.64		-280.47		-279.92	-283.36
1993		-277.76		-277.15		-276.15		-275.89		-278.11		-278.07	-277.19
1994		-276.72		-276.77		-277.04		-277.58		-279.71		-278.81	-277.77
1995		-277.58		-277.56		-277.66		-278.23		-280.74		-280.20	-278.66
1996		-279.40				-279.54		-279.96		-282.07		-282.93	-280.78
1997		-281.54		-280.04		-279.66		-279.47		-281.69		-281.30	-280.62
1998		-279.33		-278.31		-278.48		-279.09		-282.14		-282.69	-280.01
1999		-281.87		-283.25		-283.59		-283.53		-286.32		-287.28	-284.31
2000				-285.72		-285.82		-285.70					-285.75
2001													
2002												-292.41	-292.41
2003	-291.50	-290.57				-287.79			-287.72		-289.22		-289.36
2004		-286.10		-288.23		-288.34		-288.34		-290.37		-290.92	-288.72
2005		-289.45		-289.72				-288.82				-291.12	-289.78
2006		-289.52		-289.87									-289.69
Ave.	-285.42	-283.68	-284.55	-283.01	-284.42	-282.44	-284.19	-282.33	-285.56	-283.42	-286.59	-283.43	-284.77



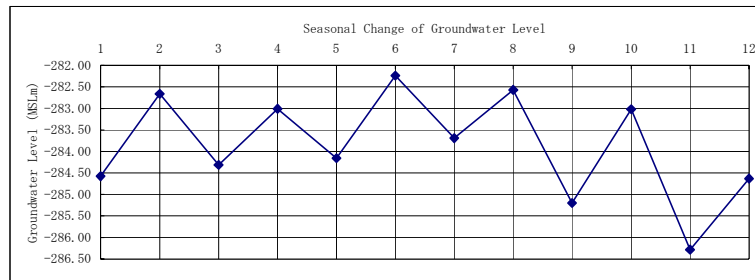
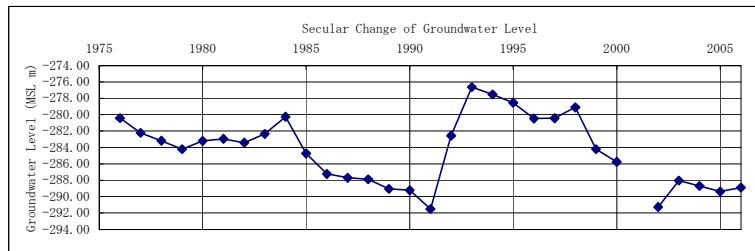
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 GWA_Name_E Alluvium
 LOC_Name_E Al Jiftlik
 GR_Governate_E Jericho

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1976	-281.08		-280.87	-281.20	-281.71	-281.51	-281.08	-281.41	-281.86	-282.36	-282.62	-282.41	-281.65
1977	-282.36	-282.83	-282.97	-283.65	-283.55	-283.07	-282.83	-283.20	-283.88	-284.03	-284.06	-283.31	
1978	-283.45	-283.82		-284.42	-284.25	-283.78	-283.75	-283.86	-284.23	-284.89	-284.88	-284.13	
1979	-284.70	-284.89	-285.06	-285.10	-285.07	-284.71	-284.70		-285.00		-286.20	-285.05	
1980				-284.26			-283.87				-285.31	-284.48	
1981	-284.40		-283.79		-283.65		-283.05		-283.45		-285.06	-283.90	
1982	-285.19		-284.21		-284.51		-283.85		-283.65		-284.93	-284.39	
1983	-284.15		-283.52		-282.58		-282.71		-283.00		-284.22	-283.36	
1984	-283.35		-282.41		-280.82				-282.98		-284.40	-282.79	
1985	-285.13		-285.02		-285.73		-284.98		-285.65		-287.36	-285.64	
1986	-287.39		-288.07		-287.73				-288.39		-289.02	-288.12	
1987	-287.73		-287.49		-288.26		-287.57		-289.22		-290.33	-288.43	
1988	-288.92		-287.47		-288.24				-288.95		-290.60	-288.84	
1989	-288.96		-288.68		-289.51				-290.04			-289.30	
1990	-290.10		-289.15		-289.51		-288.77		-290.40		-292.03	-289.99	
1991		-291.79		-292.16				-290.79		-293.13		-292.77	-292.13
1992		-290.49		-286.62						-281.23		-280.27	-284.65
1993		-278.78		-278.18		-277.47				-279.26		-279.15	-278.57
1994		-277.87				-278.35		-278.89		-280.49		-279.76	-279.07
1995		-278.40		-278.39		-278.81		-279.40		-281.45		-281.01	-279.58
1996		-280.22		-280.12		-280.63		-281.00		-283.15		-283.50	-281.44
1997		-282.13		-280.66		-280.51		-280.50		-282.37		-281.83	-281.33
1998		-280.02		-279.22		-279.42		-280.25		-282.68		-280.32	
1999		-282.45		-283.78				-284.26		-286.70		-287.75	-284.99
2000		-286.15		-286.47		-286.55		-286.40				-286.39	
2001													
2002											-287.63		-287.63
2003		-291.24				-289.97			-288.02				-289.74
2004				-289.63		-289.77		-290.45		-291.83		-292.00	-290.74
2005		-326.87		-290.85									-308.86
2006		-290.15		-289.95									-290.05
Ave.	-285.49	-286.76	-285.28	-284.40	-285.29	-282.66	-284.29	-283.37	-286.06	-284.11	-286.57	-284.05	-285.96



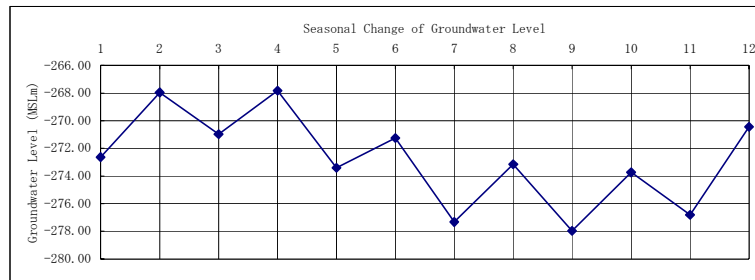
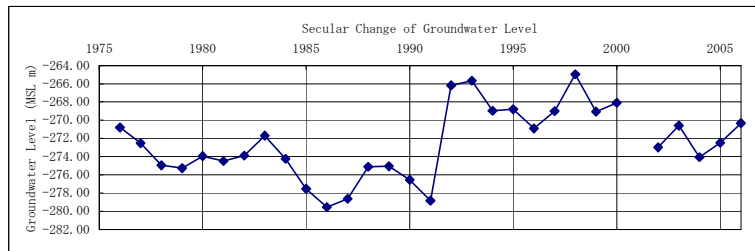
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 LOC_Name_E Al Jiftlik
 GR_Governate_E Jericho

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1976	-279.87	-279.81	-279.39	-279.73	-280.34	-280.18		-280.25	-280.73	-281.27	-281.56	-281.37	-280.41
1977	-281.35	-281.62	-281.81		-282.46	-282.09	-281.91	-282.19		-282.77	-283.00	-283.05	-282.22
1978	-282.70		-282.96	-283.32	-283.22	-282.84	-282.81	-282.98	-283.29	-283.83	-283.89		-283.18
1979	-283.65	-283.79	-283.99	-284.03	-284.05	-283.65	-283.67		-285.21		-285.21	-284.92	-284.22
1980			-283.51		-282.85		-282.64		-282.87		-284.23		-283.22
1981	-283.53		-282.75		-282.59		-282.12		-282.55		-284.13		-282.94
1982	-284.17		-283.09		-283.48		-283.00		-282.73		-283.97		-283.41
1983	-283.24		-282.65		-282.05		-281.52		-281.79		-282.87		-282.35
1984	-282.21		-278.32		-277.67		-277.80		-282.05		-283.48		-280.25
1985	-284.20		-284.05		-284.62		-283.80		-285.27		-286.50		-284.74
1986	-286.65		-287.29		-286.91		-286.50		-287.79		-288.23		-287.23
1987	-286.90		-286.44		-287.49		-287.07		-288.68		-289.64		-287.70
1988	-288.15		-286.35		-287.22		-286.97		-288.53		-290.09		-287.88
1989	-288.18		-288.53		-288.66				-289.43		-290.53		-289.06
1990	-289.30		-288.11		-288.73		-288.20		-289.65		-291.31		-289.22
1991		-291.26		-291.42				-290.35		-292.45		-292.12	-291.52
1992		-289.40		-285.53		-282.00		-279.92		-279.65		-278.80	-282.55
1993		-277.01		-276.27		-275.62		-275.69		-277.61		-277.68	-276.65
1994		-276.23		-276.29				-277.39		-279.26		-278.45	-277.52
1995		-277.26		-276.98				-278.07		-280.33		-280.02	-278.53
1996		-279.14		-278.82		-279.48		-280.05		-282.44		-282.89	-280.47
1997		-281.30		-279.51		-279.48		-279.59		-281.55		-281.23	-280.44
1998		-279.08		-277.42		-278.14				-281.81			-279.11
1999		-281.55		-282.94		-283.44				-286.09		-287.08	-284.22
2000		-285.59		-285.49		-286.02		-285.91					-285.75
2001													
2002		-289.76									-291.93	-292.08	-291.26
2003			-289.81	-287.89		-287.84		-286.70	-287.42			-288.49	-288.02
2004		-287.12		-287.59		-288.30		-288.38		-290.16		-290.64	-288.70
2005				-289.00				-288.49				-290.64	-289.38
2006				-288.89									-288.89
Ave.	-284.58	-282.66	-284.31	-283.01	-284.16	-282.24	-283.69	-282.57	-285.20	-283.02	-286.28	-284.63	-284.37



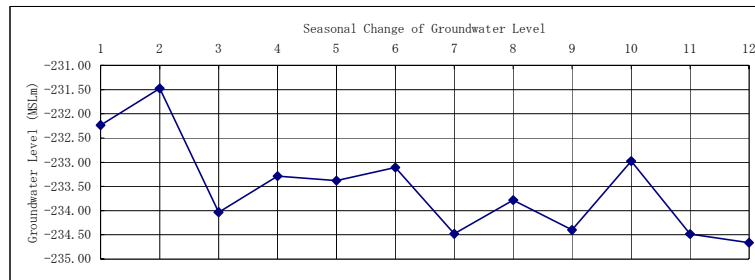
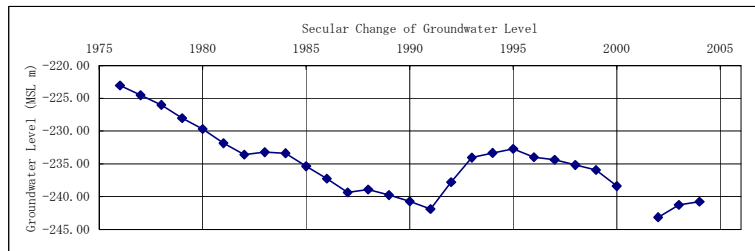
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 GWA_Name_E Neogene
 LOC_Name_E Furush Beit Dajan
 GR_Governate_E Jericho

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1976	-267.06	-265.51	-264.60	-267.04	-269.65	-270.68		-275.60	-275.94	-275.42	-274.80	-272.57	-270.81
1977	-269.77	-269.09	-267.13		-272.58	-274.61		-276.45		-276.12	-274.11	-272.91	-272.53
1978	-270.15	-272.12	-272.12	-273.30		-276.52	-277.45	-277.88	-277.82	-277.00	-275.15		-274.95
1979	-273.11	-271.10	-273.62	-275.82	-276.86	-276.79	-277.59		-277.55		-275.03		-275.28
1980	-272.82		-270.76		-271.20		-275.60		-276.90		-276.45		-273.96
1981	-272.06		-272.34		-273.47		-276.35		-277.54		-275.21		-274.50
1982	-272.54		-269.19		-273.53		-276.43		-278.06		-273.63		-273.90
1983	-271.90		-269.15		-268.86		-271.64		-276.22		-272.38		-271.69
1984	-270.40				-271.17		-276.66		-276.86		-276.16		-274.25
1985	-275.41		-272.72		-276.62		-277.59		-279.66		-283.17		-277.53
1986	-277.70		-276.47		-276.36		-281.81		-283.72		-281.30		-279.56
1987	-275.39		-274.16		-278.02		-281.35				-284.24		-278.63
1988	-275.44		-270.05		-275.12		-276.97		-277.37		-275.79		-275.12
1989	-272.02		-271.09		-275.25		-277.60		-278.64		-275.79		-275.07
1990	-273.74		-271.13		-275.10		-278.27		-280.67		-280.35		-276.54
1991		-275.69		-275.84		-279.11		-280.33		-282.46		-279.58	-278.84
1992		-271.14		-264.75		-264.19		-265.50		-266.73		-264.75	-266.18
1993		-263.67		-263.62		-264.52		-267.21		-268.74		-266.23	-265.67
1994				-265.20		-269.74		-271.08		-271.97		-266.80	-268.96
1995		-265.52		-264.92		-270.12		-271.32		-272.14		-268.82	-268.81
1996		-267.52		-266.65		-270.50		-273.00		-274.83		-273.00	-270.92
1997		-268.28		-265.87		-269.34		-272.02		-271.44		-267.03	-269.00
1998		-261.96		-258.12		-265.92		-269.99				-268.87	-264.97
1999		-262.12				-271.22		-272.08		-271.52		-268.39	-269.07
2000		-262.52		-265.99		-271.06		-272.82					-268.10
2001													
2002		-270.65									-275.32		-272.99
2003			-270.00		-267.42	-270.32				-274.67			-270.60
2004				-269.57		-275.25		-276.27		-276.47		-272.77	-274.07
2005		-269.77		-270.40				-275.72				-274.07	-272.49
2006		-270.52		-270.12									-270.32
Ave.	-272.63	-267.95	-270.97	-267.82	-273.41	-271.24	-277.33	-273.15	-277.97	-273.74	-276.81	-270.45	-272.51



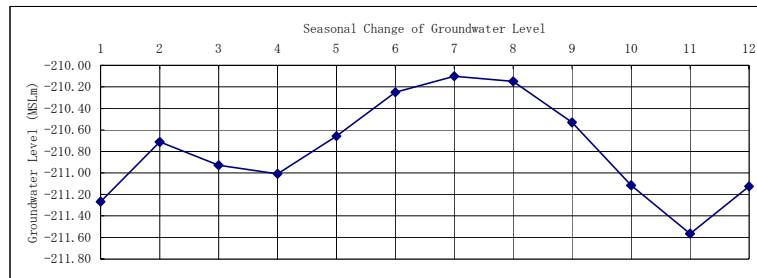
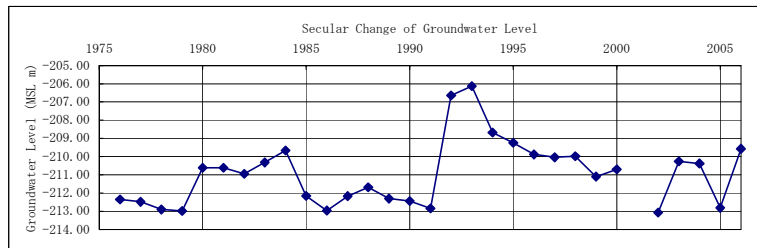
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 GWA_Name Upper Cenomanian
 LOC_Name_E Furush Beit Dajan
 GR_Governate_E Jericho

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1977	-223.53	-223.79			-224.05	-224.54	-224.67			-225.13	-225.21	-225.35	-224.53
1978	-225.08	-225.21	-225.40	-225.57	-225.88	-225.84	-226.02	-226.31	-226.56	-227.02	-227.14		-226.00
1979	-227.10	-227.34	-227.50	-227.50	-228.03	-228.37	-228.52		-228.77		-229.18		-228.04
1980	-229.06		-228.81		-229.15		-229.74		-230.36		-230.94		-229.68
1981	-230.68		-230.74		-231.33		-232.17		-232.93		-233.27		-231.85
1982	-233.12		-232.44		-233.40		-233.91		-234.43		-234.35		-233.61
1983	-233.68		-233.00		-232.97		-232.87		-233.72		-233.07		-233.22
1984	-232.38		-232.31		-232.72		-233.69		-234.39		-234.80		-233.38
1985	-234.82		-234.17		-235.21		-235.66		-235.97		-236.37		-235.37
1986	-235.33		-236.39		-236.92		-237.76		-238.37		-238.70		-237.25
1987	-238.28		-237.98		-239.17		-239.68		-240.29		-240.75		-239.36
1988	-239.45		-237.38		-238.73		-239.21		-239.96		-238.72		-238.91
1989	-238.57		-238.31		-239.41		-240.58		-240.84		-240.85		-239.76
1990	-240.26		-239.80		-240.36		-240.99		-241.41		-241.53		-240.73
1991		-241.05		-241.01			-241.73	-242.08		-243.20		-242.19	-241.88
1992				-238.30		-237.31				-237.77			-237.79
1993		-234.81				-233.88		-234.01		-234.31		-233.25	-234.05
1994				-232.84		-233.20		-233.61		-233.67			-233.33
1995		-232.38		-232.11		-232.72		-233.31		-233.83		-231.97	-232.72
1996		-232.56		-232.65		-233.81		-234.31		-235.29		-235.28	-233.98
1997				-232.86		-234.54				-235.73			-234.38
1998		-235.00		-233.74				-235.91				-236.01	-235.17
1999		-234.04		-235.29		-235.83						-238.59	-235.94
2000		-237.81		-238.17		-239.21							-238.40
2001													
2002												-243.14	-243.14
2003			-242.24			-240.31							-241.28
2004				-240.31		-240.91		-241.11					-240.78
2005													
2006													
Ave.	-232.23	-231.47	-234.03	-233.29	-233.38	-233.11	-234.48	-233.79	-234.40	-232.98	-234.49	-234.66	-234.91



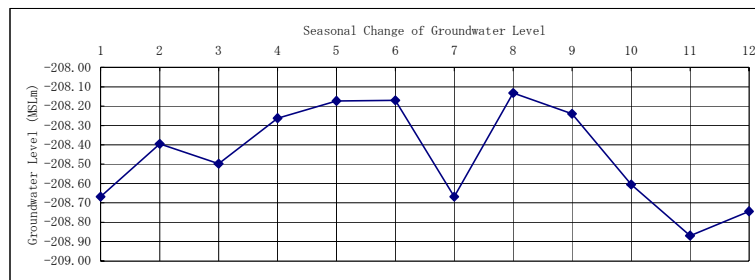
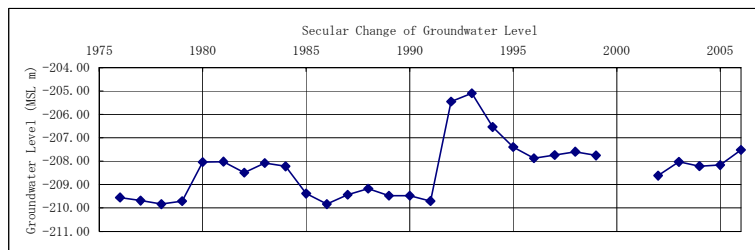
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 GWA_Name_E Neogene
 LOC_Name_E Bardala
 GR_Governate_E Tubas

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1976	-212.45			-211.78					-212.06	-212.65	-212.81		-212.35
1977	-212.54		-212.9	-212.71		-212.16	-211.38		-211.95		-213.08	-213.15	-212.48
1978		-211.7	-213.23	-213.57	-213.68	-213.42		-211.9		-212.77	-212.87	-213	-212.90
1979	-212.59	-212.87	-213.26	-213.42							-212.77		-212.98
1980	-210.9	-210.1	-209.93	-210.05	-210.99	-209.88			-210.28	-211.07	-212.03	-210.95	-210.62
1981	-210.58		-210.48	-210.57	-209.96					-210.73	-210.93	-211.07	-210.62
1982	-211.08	-211.29	-211.4	-211.42		-210.81		-210.68	-210.31	-210.68	-210.99	-210.77	-210.94
1983	-210.76	-210.17	-210.07	-210.55	-209.84	-209.39		-209.57	-210.22	-210.79	-211.17	-211.05	-210.33
1984	-210.99	-210.84	-210.8	-208.68	-208.43	-208.34	-207.24	-208.44	-211.09	-211.82			-209.67
1985	-212.18		-211.96	-212.42	-212.61	-211.72		-211.27	-211.65		-212.59	-213.06	-212.16
1986	-212.89	-213.19	-213.35		-212.86		-212.2	-212.46		-213.49	-213.66	-212.53	-212.96
1987	-212.15	-211.9	-212.29	-212.45	-212.41	-211.61	-211.37	-211.31	-212.12	-212.8	-212.61	-213.04	-212.17
1988	-212.87	-212.4	-211.75		-211.75	-211.02	-210.56	-210.52	-211.09	-212.2	-212.75		-211.69
1989	-212.21	-212.16	-212.43	-212.35		-212.79	-211.25	-211.12	-211.99		-213.35	-213.44	-212.31
1990	-212.28		-212.37	-213.03	-212.43	-212.49	-211.54	-211.66	-212.42	-213.09	-212.64	-212.93	-212.44
1991	-212.83	-212.33	-212.59		-213.47	-213.69	-212.19	-211.63	-212.51	-213.57	-213.68		-212.85
1992	-211.14	-209.82	-206.92	-206.27	-205.89	-205.78	-204.78	-204.69	-205.46	-206.06	-206.55	-206.31	-206.64
1993	-205.78	-205.32	-205.65		-205.5	-205.43		-205.2	-206.53	-206.94	-207.19	-207.73	-206.13
1994		-208.19			-207.89	-207.97	-208.03	-208.36	-209.34	-209.73	-209.54	-209.03	-208.68
1995	-209.07	-209.12	-208.92	-208.67		-208.34	-208.73	-209.15		-210.56	-210.65		-209.25
1996		-210.65	-210.5	-209.95	-209.39	-209.36	-209.25		-210.06				-209.88
1997								-209.75	-209.93	-210.03	-210.07	-210.43	-210.04
1998	-210.6	-210.52	-210.55	-209.9	-209.62	-209.32	-209.34						-209.98
1999										-211.26	-210.94		-211.10
2000	-210.72		-210.32	-210.82		-210.93							-210.70
2001													
2002							-215.17					-210.97	-213.07
2003		-211.24					-209.17						-210.26
2004	-209.99		-210.17		-210.42	-210.07		-210.63		-210.95		-210.42	-210.38
2005		-210.17			-213.97			-214.31					-212.82
2006		-209.72	-209.42										-209.57
Ave.	-211.27	-210.71	-210.93	-211.01	-210.66	-210.25	-210.10	-210.15	-210.53	-211.12	-211.57	-211.12	-210.93



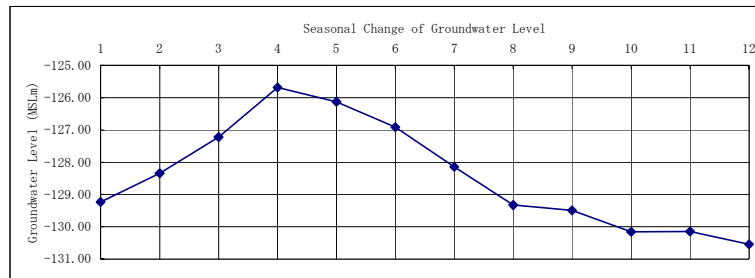
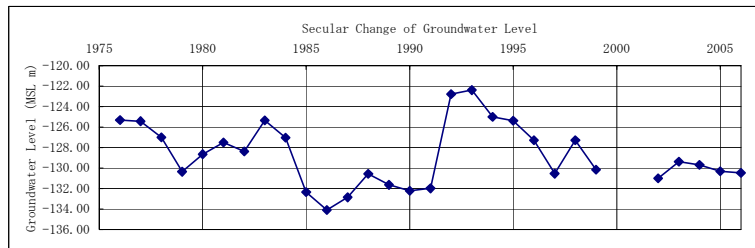
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1977	-209.68		-210.03	-209.83			-208.87			-209.75	-209.95		-209.68
1978	-209.86		-210.05	-210.3	-210.3	-210.15	-209.47	-209.24	-209.35	-209.67	-209.96		-209.84
1979	-209.72	-209.93	-210.07	-210.06	-210.16	-210.03	-209.55	-209.38	-209.45	-209.71	-209.53	-208.92	-209.71
1980	-208.09	-207.9	-207.85	-207.76	-208.52	-207.68	-207.54	-207.66	-207.95	-208.49	-208.52	-208.47	-208.04
1981		-208.37	-208.39	-208.33	-207.76	-206.35			-207.97	-208.44		-208.54	-208.02
1982	-208.78	-208.93	-208.91	-208.95	-208.83	-208.5			-207.76	-207.88	-208.17	-208.18	-208.49
1983	-208.32		-207.75	-208.3	-207.88	-207.57	-207.62	-207.84	-208.27	-208.59	-208.65	-208.65	-208.08
1984	-208.66	-208.61	-208.48	-206.96	-206.3	-206.75			-208.72	-209.08	-209.32	-209.33	-208.22
1985	-209.38	-209.45	-209.33	-209.44	-209.43	-209.22		-208.85	-209.7	-209.1	-209.53	-209.79	-209.38
1986	-209.82	-209.88	-209.88		-209.75			-209.6		-209.96	-210.16	-209.62	-209.83
1987	-209.41	-209.36	-209.42	-209.45	-209.28	-208.95			-209.37	-209.59	-209.6	-209.86	-209.43
1988	-209.94	-209.65	-208.98		-208.8	-208.49			-208.41	-209.09	-209.6	-209.64	-209.18
1989	-209.54	-209.49	-209.42	-209.22		-208.95			-208.97	-209.68	-209.96	-210.03	-209.47
1990	-209.63		-209.61	-209.58	-209.45	-209.4	-209.01	-208.87	-209.34	-209.7	-209.79	-209.82	-209.47
1991	-209.73	-209.49	-209.53	-209.56	-210.03	-209.99		-209.1	-209.38	-210.18	-210.02		-209.70
1992	-208.52	-207.69	-205.03	-204.66	-204.53	-204.45			-204.27	-204.82	-205.13		-205.46
1993	-204.97	-204.75	-204.77	-204.67	-204.63				-204.65	-205.07	-205.42	-206.21	-205.10
1994	-205.48	-205.59		-206.39	-206.31					-207.31	-207.48	-207.24	-206.54
1995	-207.26	-207.18	-207.23			-206.85		-207.22		-207.93	-208.1		-207.40
1996		-208.31	-208.13	-207.75	-207.37				-207.8				-207.87
1997								-207.54	-207.69	-207.72	-207.79	-207.96	-207.74
1998		-208.12	-208	-207.71	-207	-207.15							-207.60
1999	-207.76												-207.76
2000													
2001													
2002												-208.62	-208.62
2003	-208.6	-208.5		-207.32	-207.7					-207.95	-208.1	-208.03	-208.03
2004	-207.89		-207.89		-208.3	-208.1		-208.23		-208.65		-208.4	-208.21
2005		-207.95			-207.4			-207.75			-209.57		-208.17
2006		-207.6	-207.44										-207.52
Ave.	-208.67	-208.40	-208.50	-208.26	-208.17	-208.17	-208.67	-208.13	-208.24	-208.61	-208.87	-208.74	-208.35



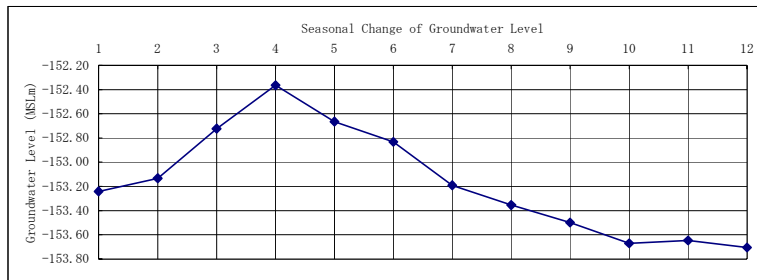
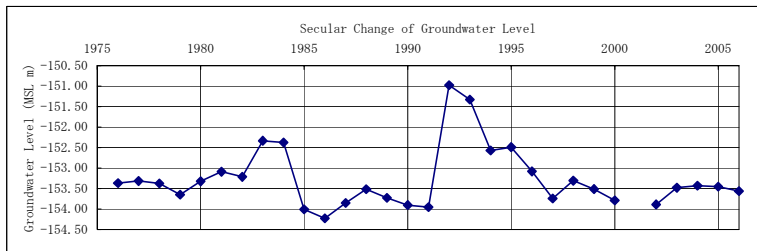
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1977	-124.08	-122.84	-122.66	-122.84	-123.28			-125.07	-127.23	-127.67	-127.84	-128.13	-128.19	-125.44
1978	-124.73		-123.31	-123.56	-124.14	-126.22	-127.82	-129.05	-130.13	-130.44	-130.66		-127.01	
1979	-130.99	-129.97	-127.04	-127.49	-128	-128.9	-131		-132.9	-132.35	-132.82	-132.58	-130.37	
1980	-132.63	-132.53	-130.62	-125.78	-124.84	-124.38	-126.65	-128.06		-129.87	-129.83	-130.01	-128.65	
1981	-130.67	-127.48	-124.84	-123.51	-123.81	-125.27	-126.74	-128.37	-129.77	-131.1		-131.11	-127.52	
1982	-130.36	-128.28	-126.58	-125.13	-125.28	-126.66	-127.64	-129.07	-129.88	-131.2	-132.11		-128.38	
1983	-128.62		-125.77	-122.09	-122.72	-123.05	-123.66		-126.36	-127.67	-127.75	-125.87	-125.36	
1984		-122.96	-122.99	-122.08			-125.43		-130.28		-132.45	-133.09	-127.04	
1985	-133.36	-133.24	-132.6	-129.51	-129.45	-131.11		-132.54		-133.78	-133.95	-134.09	-132.36	
1986	-134.23	-134.26	-133.78		-133.6		-133.92	-134.39		-134.38	-134.46	-133.99	-134.11	
1987	-133.77			-131.61		-131.14	-132.06	-133	-133.74	-133.72		-133.85	-132.86	
1988	-134.05	-133.8	-129.2		-126.27	-127.42	-128.79	-130.33	-131.07	-131.58	-131.96	-131.8	-130.57	
1989	-132.16	-131.65	-130.67	-128.75		-129.28	-130.5	-131.75	-132.74	-133.54	-133.68	-133.42	-131.65	
1990	-132.81		-132.41	-131.74	-130.86	-130.89	-131.76	-132.83	-133.28	-133.32	-132.6	-132.05	-132.23	
1991	-131.81	-131.66	-131.32	-131.41	-131.36	-131.58	-132.15	-132.9	-133.17	-132.98	-131.59		-131.99	
1992	-128.32	-127.04	-121.86	-121.36	-121.44	-121.5	-121.62	-121.67	-121.91	-122.09	-121.97		-122.80	
1993	-121.54	-121.34	-121.32	-124.32	-121.54	-121.82		-122.18	-122.81	-123.14	-123.32	-123.06	-122.40	
1994	-122.73	-122.27		-122.14	-122.94	-124.24	-124.83	-125.86	-127.58	-128.45	-128.65	-125.48	-125.02	
1995	-123.36	-122.81	-122.64	-122.92		-124.41	-126.81	-127.94		-128.72	-128.9		-125.39	
1996		-127.69	-126.29	-124.63	-125.72	-127.44	-129.07		-130.22				-127.29	
1997								-130.18	-130.61	-130.59	-130.57	-130.85	-130.56	
1998			-127.24	-125.15	-126.24		-128.59	-129.22					-127.29	
1999	-130.13	-130.22											-130.18	
2000														
2001														
2002												-131.02	-131.02	
2003		-131.34	-129.19	-128.44			-128.74			-129.79		-128.84	-129.39	
2004	-130.37		-129.29		-128.74	-129.16		-129.81		-129.98		-130.54	-129.70	
2005		-130.49						-130.23			-130.27		-130.33	
2006		-130.49											-130.49	
Ave.	-129.23	-128.34	-127.22	-125.68	-126.12	-126.92	-128.14	-129.33	-129.50	-130.16	-130.15	-130.55	-128.71	



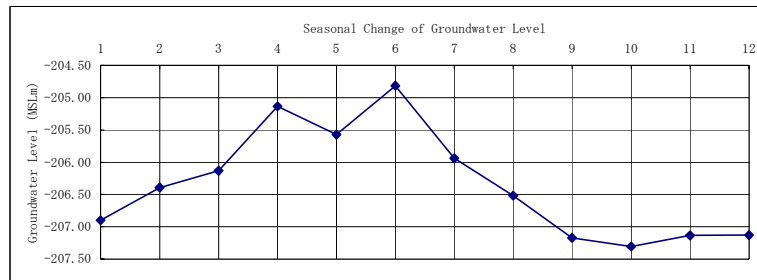
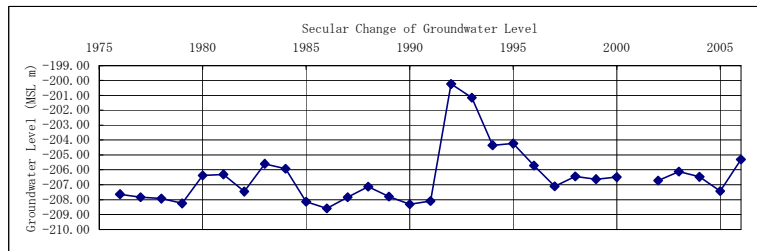
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1977	-152.47		-152.7	-152.62		-152.55	-153.04	-153.66	-153.79	-154.41	-154.29	-153.65	-153.32
1978	-153.2	-152.82	-152.99	-153.04	-153.32	-153.41	-153.34	-154.36	-153.25	-153.89	-153.42	-153.48	-153.38
1979	-153.69	-153.62	-153.18	-153.17	-153.11	-153.48	-153.81	-153.92	-154.04	-153.98	-153.94	-153.87	-153.65
1980	-153.73	-153.87	-153.38	-152.84	-152.18	-152.34	-153.07	-153.46	-153.7	-153.81	-153.87	-153.65	-153.32
1981		-153.39	-152.63	-151.99	-152.16	-152.65	-153.15	-153.54	-153.58	-153.9		-153.93	-153.09
1982	-153.85	-153.54	-153.2	-152.68	-152.7	-153.1	-153.4	-153.63	-153.04	-153.14	-153.03	-153.31	-153.22
1983	-152.89		-151.28	-150.95	-151.63	-151.75	-152.17	-152.56	-152.96	-153.35	-153.31	-152.85	-152.34
1984	-152.24	-151.75	-151.69	-150.08			-151.04	-151.19	-153.81	-153.94	-154	-154.04	-152.38
1985	-154.11	-154.05		-153.6		-153.74		-153.95	-154.11	-154.15	-154.23	-154.17	-154.01
1986	-154.24	-154.24	-154.06		-154.03		-154.15	-154.29		-154.35	-154.39	-154.32	-154.23
1987	-154.09		-153.79	-153.7	-153.43	-153.52	-153.7	-153.92	-154.02	-154.15		-154.22	-153.85
1988	-154.32	-154.04	-153.16		-152.54	-152.9	-153.23	-153.52	-153.59	-153.75	-153.84	-153.81	-153.52
1989	-153.89	-153.68	-153.56	-152.98		-153.12	-153.56	-153.82	-153.9	-154.15	-154.17	-154.19	-153.73
1990	-154.15		-153.92	-153.69	-153.57	-153.62	-153.76	-153.96	-154.07	-154.11	-154.08	-154.04	-153.91
1991		-154.12	-153.98	-153.91	-153.74	-153.67	-153.88	-154.06	-154.1	-154.07	-154.02		-153.96
1992	-152.39	-152.32	-147.96	-150.45	-150.64	-150.61	-151.06	-151.17	-151.31	-151.44	-151.46		-150.98
1993	-150.74	-150.72	-150.72	-150.66	-150.89	-151.24		-151.53	-151.83	-152.06	-152.21	-152.05	-151.33
1994	-151.84	-151.6		-151.49	-151.84	-152.55	-152.77	-152.96	-153.48	-153.58	-153.56	-152.63	-152.57
1995	-151.9	-151.67	-151.42	-151.57		-152.32	-153.13	-153.42		-153.49	-153.52		-152.49
1996		-153.41	-152.69	-152.44	-152.54	-153.19	-153.57		-153.76				-153.09
1997								-153.72	-153.79	-153.79	-153.71	-153.72	-153.75
1998	-153.73	-153.52	-153.11	-152.52	-152.64	-153.04	-154.39	-153.54					-153.31
1999	-153.47	-153.56											-153.51
2000			-153.74			-153.84							-153.79
2001													
2002												-153.89	-153.89
2003		-153.87	-152.86	-152.59			-153.61			-153.17		-154.79	-153.48
2004	-154.54		-153.16		-152.79			-153.4		-153.2		-153.5	-153.43
2005		-153.43			-153.29			-153.57			-153.54		-153.46
2006		-153.69	-153.44										-153.57
Ave.	-153.24	-153.13	-152.72	-152.36	-152.66	-152.83	-153.19	-153.35	-153.50	-153.67	-153.65	-153.71	-153.26



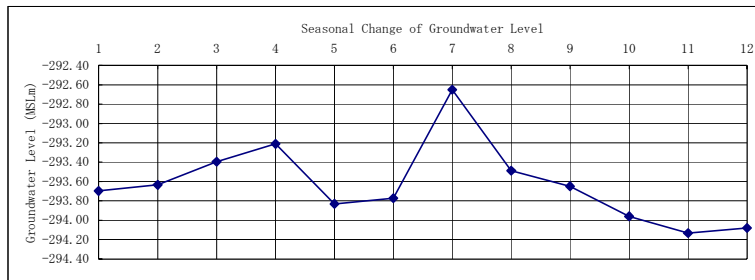
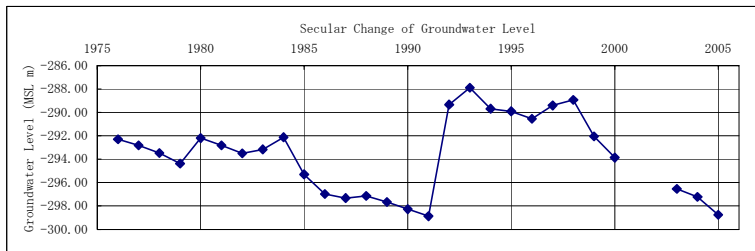
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1977	-207.87		-205.75	-206.08		-205.8	-206.02	-207.68	-209.19	-209.81	-209.99	-210.16	-207.84
1978	-208.2		-207.47	-207.04	-206.99			-208.89	-209.92	-208.21	-207.04	-207.66	-207.94
1979	-208.16	-208.59	-208.5	-207.81	-207.14		-208.8		-209.21	-208.52	-208.14	-207.68	-208.26
1980	-206.85	-207.32	-207.69	-206.67	-205.92	-204.33	-205.09		-206.85	-207.33	-205.54	-206.5	-206.37
1981	-206.97	-207.56	-207.26	-205.31	-204.27	-204.52		-206.12		-207.44		-207.27	-206.30
1982	-207.74	-207.85	-207.78	-207.14	-206.3	-206.42			-207.31	-207.62	-208	-208.43	-207.46
1983	-208.65		-206.27	-203.78	-203.58	-203.16			-205.42	-206.22	-206.3	-207	-205.60
1984	-206.16	-204.89	-204.54	-203.25	-203.74	-203.86			-207.84	-208.59	-208.15	-208.22	-205.92
1985	-208.53	-208.63	-208.65	-208.16	-207.46	-206.96			-208		-208.31	-208.58	-208.14
1986	-208.73	-209.01	-208.34		-208.36		-208.47	-209		-208.85	-208.72	-207.87	-208.59
1987	-207.7		-207.77	-207.78	-207.43	-207.34			-208.14	-208.2		-208.36	-207.84
1988	-208.78	-208.43	-206.32		-205.97	-205.57	-205.95	-206.94	-207.33	-207.72	-207.7	-207.75	-207.13
1989	-208	-207.95	-207.93	-206.64		-206.39	-207.08	-207.88	-208.3	-208.5	-208.57	-208.42	-207.79
1990	-208.5		-208.35	-208.21	-207.6	-207.36	-207.88	-208.57	-208.75	-208.9	-208.77	-208.53	-208.31
1991	-208.62	-208.19	-207.97	-207.7	-207.66	-207.42	-207.72	-208.42	-208.62	-208.57	-208.26		-208.10
1992	-204.69	-203.34	-197.24	-196.62	-197.8	-198.55	-199.53	-200.19	-200.74	-201.04	-201.41	-201.78	-200.24
1993	-200.04	-199.73	-199.73	-199.56	-199.96	-200.34		-201.65	-202.27	-202.76	-203.2	-203.56	-201.16
1994	-203.52	-203.31		-202.78	-202.48	-203.24	-204.33	-205.31	-205.98	-206.11	-205.92	-204.92	-204.35
1995	-204.27	-203.57	-202.54	-201.94		-202.31	-204.74	-206.21		-206.61	-205.96		-204.24
1996		-206.97	-205.85	-204.85	-204.44	-204.78	-206.34		-206.78				-205.72
1997								-206.93	-207.29	-207.18	-206.93	-207.17	-207.10
1998	-207.32	-207.32	-206.72	-205.52	-205.53	-205.57	-206.53	-207					-206.44
1999	-206.44	-206.81											-206.63
2000						-206.49							-206.49
2001													
2002												-206.72	-206.72
2003	-207.41	-207.25		-204.43			-204.68			-206.5		-206.45	-206.12
2004	-206.6				-206.42	-205.86		-206.66		-206.55		-206.73	-206.47
2005		-206.73			-210.1			-206.87			-206		-207.43
2006		-205.3											-205.30
Ave.	-206.90	-206.39	-206.13	-205.13	-205.57	-204.81	-205.94	-206.52	-207.17	-207.31	-207.14	-207.13	-206.45



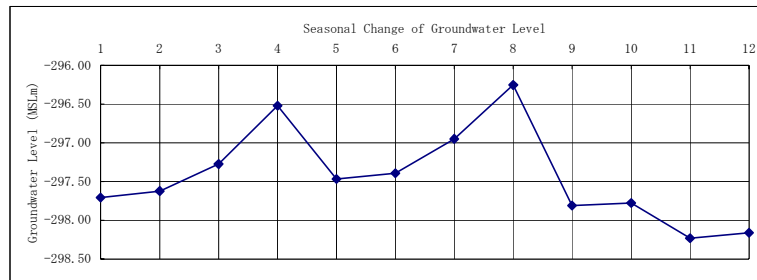
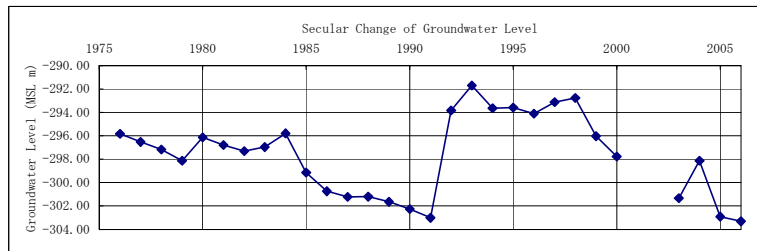
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 GR_Governate_E Jericho

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1976		-291.74		-292.27	-292.52		-291.7		-292.77	-292.48	-292.59		-292.30
1977	-292.2	-292.88	-292.92	-292.8	-292.67		-292.44	-292.36	-292.92	-293.1	-293.3	-293.42	-292.82
1978	-293.1		-293.56	-293.6	-293.49		-293.33	-293.25	-293.1	-293.35		-293.96	-294.09
1979	-293.91	-294.29		-294.15			-294.06	-294.01		-294.26		-295.3	-295.04
1980	-294.35	-293.52	-292.67	-291.99	-291.5		-291.25	-291.09	-291.18	-291.26		-293.15	-292.20
1981	-292.83	-292.52	-292.51	-292.83	-293		-292.77	-292.7	-292.63		-292.79		-293.63
1982		-293.74	-293.56	-293.4	-293.57		-293.64	-293.65	-293.14	-292.89	-293.48	-293.8	-293.73
1983	-293.71		-292.87	-292.7	-293.56		-293.4	-293.18	-292.92	-292.74	-293.18	-293.28	-293.24
1984	-293.38	-293.12	-293.21	-289.86	-289.93		-289.98	-290.04	-290.09	-293.6	-293.85	-294.1	-294.32
1985	-294.54	-294.54	-294.56	-294.98	-295.3		-295.4		-295.28	-295.64	-296.19		-296.53
1986		-296.56	-296.7		-297.04			-296.76	-296.5		-297.39	-297.63	-297.21
1987	-296.86	-296.69	-296.75	-297.03	-297.61			-297.08	-296.94	-297.37	-298	-298.03	-298.16
1988	-297.7	-297.42	-296.76		-297.2		-297.23	-296.64	-296.35	-296.82	-297.39	-297.44	-297.51
1989	-297.15	-296.93	-297.08	-298.04			-298.01	-297.48	-297.22	-297.63		-298.59	-298.37
1990	-297.82		-297.72	-297.92	-298.4		-298.35		-297.55	-298.63	-298.77	-298.7	-298.84
1991	-298.78	-298.43	-298.47	-298.6	-299.34		-299.02		-298.24	-299.41		-299.58	-298.87
1992	-298.31	-295.7	-291.42	-287.75	-286.94		-286.69	-286.11	-286.17	-287.52	-287.95	-288.56	-288.91
1993	-287.97	-287.44	-287.28	-287.6	-287.75				-287.04	-288.3		-288.87	-288.82
1994	-288.86	-288.58			-290.09			-289.63	-289.53			-289.88	-290.77
1995	-289.72	-289.45	-289.6					-289.57	-289.52		-290.55	-291	-289.92
1996		-290.25	-290.46	-290.53	-290.9		-290.41	-290.15		-291.13			-290.55
1997									-289.47	-289.43	-289.6	-289.41	-289.15
1998	-289.03		-288.79	-289.07			-289.05	-288.78					-288.94
1999	-290.47	-290.75	-291.12	-291.7	-292.22		-291.77	-291.55	-292.22		-293.55	-293.63	-293.64
2000	-293.25	-293.25	-293.28	-293.61	-294.83		-293.82	-293.73	-295.2				-293.87
2001													
2002													
2003				-297			-296.5	-296.1					-296.53
2004					-297.75		-297		-298.5		-299.17		-293.68
2005		-298.53			-298.67				-299.07				-298.76
2006													
Ave.	-293.70	-293.63	-293.39	-293.21	-293.83		-293.77	-292.65	-293.49	-293.65	-293.96	-294.13	-294.08



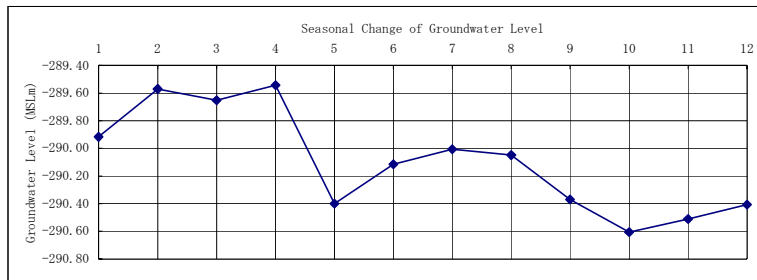
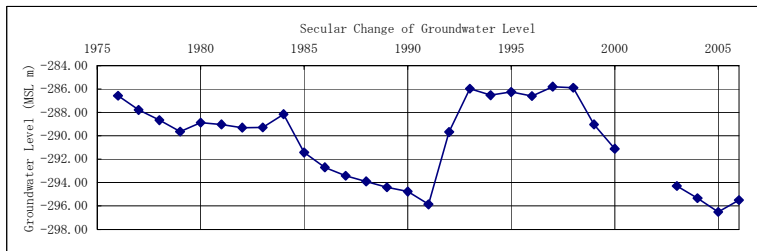
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 GR_Governate_E Jericho

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1977	-295.91		-296.48	-296.51	-296.35		-296.09	-296	-296.79	-296.83	-297.26	-297.06	-296.53
1978	-296.71	-296.77	-297.18		-297.21	-297.09	-296.87	-296.78	-297.14	-297.63	-297.77	-297.86	-297.18
1979	-297.67	-297.98	-298.07	-297.9	-297.79	-297.8	-297.75		-297.99	-298.63	-299.1	-298.73	-298.13
1980	-298.06	-297.25	-296.63	-295.88	-295.42	-295.2	-294.99	-295.06	-295.21	-296.24	-296.67	-297.1	-296.14
1981	-296.96	-296.47	-296.4	-296.78	-296.86	-296.73	-296.62	-296.5		-296.74	-297.15	-297.41	-296.78
1982	-297.52		-297.38	-297.23	-296.82	-297.55	-297.47		-296.76	-297.32	-297.55	-297.5	-297.31
1983	-297.13		-296.62	-296.57	-297.43	-297.35	-297.12	-296.79	-296.7	-296.93	-297.01	-296.96	-296.96
1984	-297.17	-296.94		-293.57	-293.7	-293.76	-293.83	-293.89	-297.38	-297.63	-297.85	-298.08	-295.80
1985	-298.24	-298.3	-298.23	-298.78	-299.18	-299.28		-299.22	-299.61	-299.05	-300.29	-300.34	-299.14
1986	-300.24	-300.04	-300.53		-300.86		-300.62	-300.46		-301.28	-301.49	-301.13	-300.74
1987	-300.77	-300.5	-300.56	-300.86	-301.5		-301.01	-300.87	-301.3	-301.97	-301.98	-302.14	-301.22
1988	-301.58	-301.3	-300.7		-301.52	-301.37	-300.72	-300.41		-301.35	-301.61	-301.53	-301.21
1989	-301.1	-300.87	-301.01	-302.05		-302.19	-301.5	-301.21	-301.6		-302.51	-302.36	-301.64
1990	-302.15		-301.68	-301.87	-302.49	-302.29	-301.72	-301.46	-302.76	-302.73	-302.78	-302.93	-302.26
1991	-302.9	-302.47	-302.38	-302.72	-303.43	-303.16	-302.62	-302.47	-303.49	-303.71	-303.75		-303.01
1992	-301.98	-300.05	-295.88	-292.56	-291.59		-290.52	-290.44	-291.7	-292.06	-292.56	-292.96	-293.85
1993	-291.91	-291.4	-291.11	-291.12	-291.6	-291.12		-290.98		-292.41	-292.6	-292.74	-291.70
1994	-292.6			-292.87	-293.8	-293.51	-293.28	-293.24	-294.48	-294.61	-294.44	-293.63	-293.65
1995	-293.37	-293.05	-293.21	-293.51		-294.12	-293.18	-293.25		-294.05	-294.51		-293.58
1996		-293.83	-293.98	-294.13	-294.46		-294.04	-293.68		-294.72			-294.12
1997								-293.07	-293.2	-293.38	-293.15	-292.79	-293.12
1998	-292.68	-292.58	-292.48	-292.58	-293.09		-292.63		-293.43				-292.78
1999	-294.4	-294.41	-294.85	-295.54	-296.11	-295.58		-296.19	-296.96	-297.18	-297.59	-297.59	-296.04
2000	-297.12	-297.1	-297.39	-297.95		-297.65	-297.71		-299.57				-297.78
2001													
2002													
2003	-301.5	-301.17											-301.34
2004					-301.8	-300.7		-282.43		-303.31		-302.41	-298.13
2005		-302.07			-302.72			-303.4			-303.45		-302.91
2006									-303.31				-303.31
Ave.	-297.71	-297.62	-297.27	-296.52	-297.47	-297.39	-296.95	-296.25	-297.81	-297.78	-298.23	-298.16	-297.66



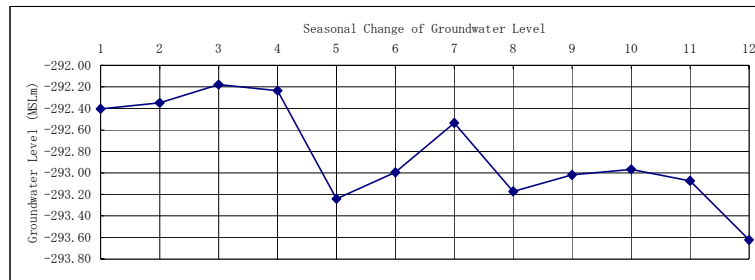
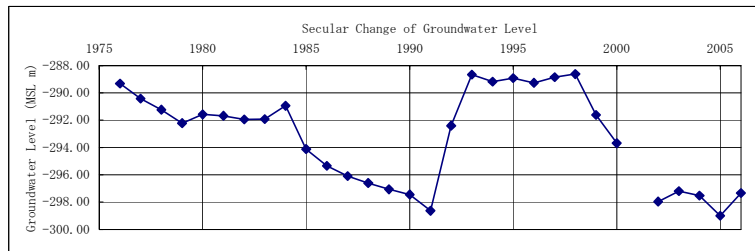
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1977	-287.26		-287.88	-287.77	-287.61		-287.25	-287.21	-287.74	-288.16	-288.44	-288.59	-287.79
1978	-287.98	-288.29	-288.42		-288.96	-288.74		-288.18	-288.49	-289.05	-289.25	-289.35	-288.67
1979	-289	-289.37	-289.5	-289.38	-289.63	-289.51	-289.38		-289.66	-290.15	-290.37	-290.2	-289.65
1980	-289.61	-289.19	-288.57	-288.34	-288.53	-288.46	-288.2	-288.15	-288.61	-289.48	-289.64	-289.8	-288.88
1981	-289.17	-288.52	-288.34	-288.73	-289.38	-289.41	-289.18	-288.89		-288.89	-289.67	-289.12	-289.03
1982	-289.33	-289.16	-288.8	-288.68	-289.45	-289.88	-289.88		-289.6	-289.34	-289.31	-288.96	-289.31
1983	-288.55		-288.36	-288.82	-290.6	-290.52	-290.17	-289.91	-289.16	-288.95	-288.6	-288.45	-289.28
1984	-288.87	-288.74	-289.04	-286.62	-287.05	-287.27	-287.19	-287.24	-289.19		-289.18	-289.26	-288.15
1985	-289.61	-289.81	-289.9	-290.9	-291.76	-292.01		-292.04	-292.5	-292.48	-292.44	-292.26	-291.43
1986	-292.22	-291.98	-292.02		-292.94		-292.64	-292.54		-293.32	-293.54	-293.08	-292.70
1987	-292.8	-292.45	-292.41	-292.92	-293.42		-293.45	-293.43	-293.99	-294.44	-294.22	-294.09	-293.42
1988	-293.58	-293.19	-293.06		-294.55	-294.74	-294.07	-293.77	-293.56	-294.12	-294.18	-294.09	-293.90
1989	-293.62	-293.33	-293.43	-294.8		-294.96	-294.41	-294.08	-294.71	-295.09	-295.01	-294.89	-294.39
1990	-294.32		-294.14	-294.31	-294.92	-294.94	-294.48	-294.2	-295.34	-295.53	-295.46		-294.76
1991	-295.47	-294.93	-294.92	-295.5	-296.26	-296.15	-295.73	-295.77	-296.54	-296.66	-296.5		-295.86
1992	-295.26	-294.26	-292.19	-290.7	-289.71	-289.16	-287.82	-287.13	-287.51	-287.49	-287.47	-287.52	-289.69
1993	-286.49	-285.89	-285.67	-286.02	-286.04	-285.22		-285.86	-286.29	-286.21	-286.11	-286.04	-285.99
1994	-285.92	-285.65		-286.08	-286.82	-286.19	-286.44	-286.48	-287.42	-287.36	-287.15	-286.43	-286.54
1995		-285.84	-285.95	-286.22		-286.84	-285.91	-285.95		-286.52	-286.84		-286.26
1996		-286.26	-286.3		-286.82	-286.65	-286.32		-287.36				-286.62
1997								-286.08	-286.32	-286.45	-284.23	-285.93	-285.80
1998	-285.76	-285.62	-285.48		-286.28	-285.99	-285.89	-286.3					-285.90
1999	-287.25	-287.31	-287.67	-288.34	-289.12			-289.27	-290.03	-290.48	-290.46	-290.38	-289.03
2000		-290.08	-290.28	-290.89	-291.27	-291.02	-291.3	-291.79	-292.27				-291.11
2001													
2002													
2003		-294.31					-294.19					-294.39	-294.30
2004					-295.14	-294.66				-296.19		-295.3	-295.32
2005					-296.3			-296.8			-296.44		-296.51
2006									-295.5				-295.50
Ave.	-289.92	-289.57	-289.65	-289.54	-290.40	-290.12	-290.01	-290.05	-290.37	-290.61	-290.51	-290.41	-290.43



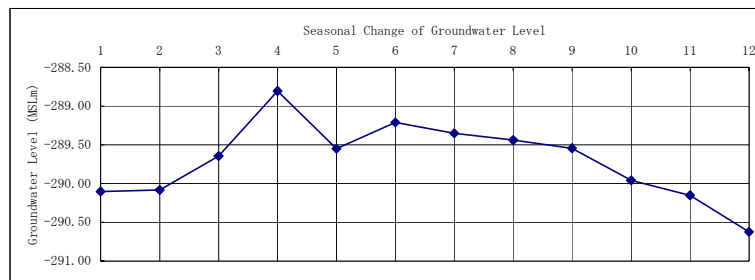
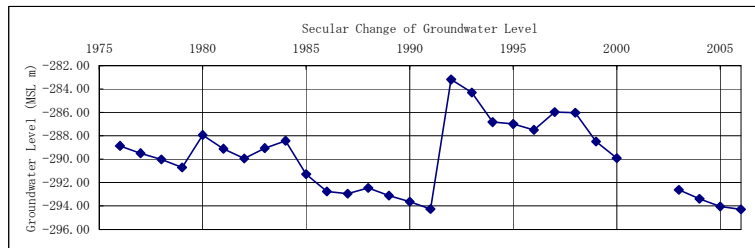
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 LOC_Name_E Marj Na'ja
 GR_Governate_E Jericho

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1976	-288.82	-289.07	-289	-289.22	-289.69				-289.09	-289.7	-289.96		-289.32
1977	-289.49	-290.3	-290.6	-290.45	-290.27		-289.97	-289.87	-290.41	-290.95	-291.08	-291.32	-290.43
1978	-290.64	-290.94	-291.11	-291.36	-291.62	-291.02			-290.85	-291.18	-291.76	-291.89	-291.24
1979	-291.69	-292.06	-292.18	-291.33	-292.33	-292.19	-292.07		-292.4		-293.05	-292.88	-292.22
1980	-292.29	-291.88	-291.23	-291.04	-291.29	-291.14	-290.94	-290.86	-291.31	-292.19	-292.31	-292.49	-291.58
1981	-291.88	-291.18	-291	-291.46	-292.07	-292.12	-291.87	-291.57		-291.85		-291.8	-291.68
1982	-291.99	-291.8	-291.46	-291.28	-292.05	-292.51	-292.57		-292.16	-292.03	-291.99	-291.64	-291.95
1983	-291.2		-291.03	-291.51	-292.8	-293.26	-292.86	-292.63	-291.85	-291.58	-291.3	-291.13	-291.92
1984	-291.53	-291.41	-291.71	-289.37	-289.8	-290	-290.05	-290.07	-291.93	-291.73	-291.84	-291.92	-290.95
1985	-292.29	-292.46	-292.57	-293.61	-294.45	-294.7			-294.77	-295.2	-295.16	-294.92	-294.12
1986	-294.67	-294.69	-294.67		-295.55		-295.31	-295.23		-296	-296.23	-295.74	-295.34
1987	-295.49	-295.12	-295.04	-295.59	-296.08		-296.15	-296.12	-296.7	-297.09	-296.9	-296.75	-296.09
1988	-296.24	-295.87	-295.75		-297.27	-297.46		-296.8	-296.5	-296.26	-296.83	-296.87	-296.60
1989	-296.3	-296	-296.1	-297.46		-297.64	-297.07	-296.79	-297.31	-297.77	-297.71	-297.56	-297.06
1990	-296.97		-296.8	-296.96	-297.58	-297.62	-297.17	-296.9	-297.97	-298.17		-298.3	-297.44
1991	-298.13		-297.6	-298.19	-298.91	-298.85		-298.37	-299.19	-299.36	-299.16		-298.64
1992	-297.91	-296.98	-294.95	-293.5	-292.5	-291.95	-290.61	-289.89	-290.12	-290.17	-290.14	-290.2	-292.41
1993	-289.17	-288.58	-288.35	-288.68	-288.74	-288.17		-288.53	-288.88	-288.85	-288.77	-288.67	-288.67
1994	-288.53	-288.27		-288.71		-289.33	-289.07	-289.18	-290.03	-289.96	-289.73	-289.04	-289.18
1995	-288.83	-288.48	-288.58			-289.42	-288.54			-289.14	-289.44		-288.92
1996		-288.87	-288.9	-288.91	-290.07	-289.27	-288.93			-289.95			-289.27
1997								-288.7	-288.95	-289.11	-288.94	-288.59	-288.86
1998	-288.42	-288.45	-288.13	-288.62	-288.98	-288.8	-288.59		-289				-288.62
1999	-289.94	-289.99	-290.38	-291.02	-291.78	-291.78	-291.28	-291.89	-293.63	-292.91	-293.12		-291.61
2000	-292.85	-292.72	-292.96	-293.56	-294.18	-293.67	-293.93	-294.41	-294.93				-293.69
2001													
2002												-297.96	-297.96
2003		-296.97		-297.3		-297.8	-296.9						-297.19
2004		-296.53			-297.7	-297.2		-298.38				-297.8	-297.52
2005					-298.81			-299.26			-298.95		-299.01
2006		-297.7							-296.96				-297.33
Ave.	-292.40	-292.35	-292.18	-292.23	-293.24	-293.00	-292.53	-293.17	-293.02	-292.97	-293.07	-293.62	-293.23



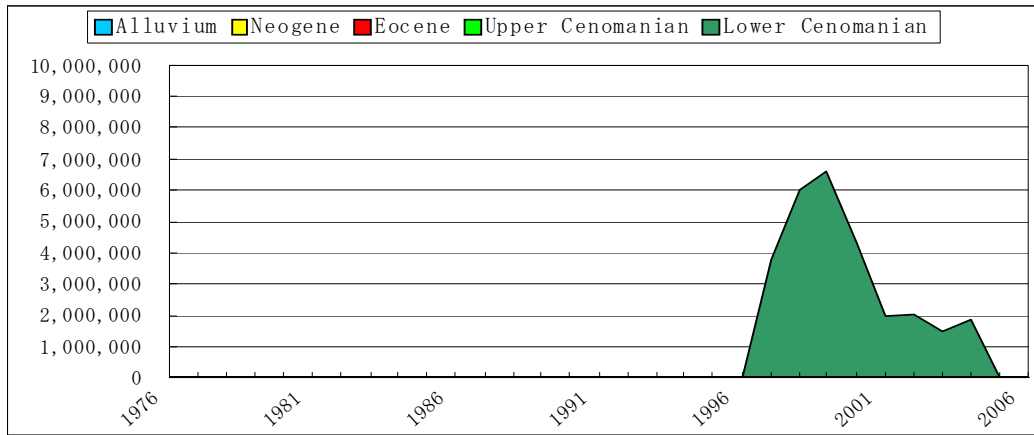
PMD_Code W20-18/012A
 GWB_Name_E Eastern
 GWA_Name_E Alluvium
 LOC_Name_E Marj Na'ja
 GR_Governate_E Tubas

	1	2	3	4	5	6	7	8	9	10	11	12	Ave.
1976	-288.55	-288.65		-288.67	-288.95		-289.1		-288.8	-288.98	-289.18		-288.86
1977	-289.19	-289.21	-289.33	-289.43	-289.5		-289.43	-289.39	-289.46	-289.74	-289.82	-289.89	-289.49
1978	-289.73		-289.82	-289.85	-289.96	-289.98	-289.91	-289.96	-290.02	-290.16	-290.34	-290.45	-290.02
1979	-290.32	-290.46		-290.69	-290.57	-290.66	-290.6		-290.67	-290.86	-291.15	-291.15	-290.71
1980	-290.08	-289.44		-287.32	-287.2	-287.19	-287.25	-287.37	-287.56	-287.98			-287.93
1981	-289.1	-288.93	-288.83	-288.98	-289.02	-289.1	-289.12	-289.12		-289.2		-289.76	-289.12
1982	-289.95	-290.13	-290.13	-290.05	-290.06	-290.14	-290.31		-289.35	-289.53	-289.8	-289.93	-289.94
1983	-289.9			-288.26	-288.94	-288.94	-288.98	-288.93	-288.95	-289.05	-289.23	-289.35	-289.05
1984	-289.43	-289.64	-289.57	-286.21	-286.23	-286.27	-286.33	-286.39	-290.08	-290.11	-290.32	-290.46	-288.42
1985	-290.69	-290.8	-290.82	-291	-291.12	-291.33		-291.38	-291.43		-292	-292.29	-291.29
1986	-292.4	-292.49	-292.47		-292.99		-292.86	-292.68		-292.91	-293.12	-292.82	-292.75
1987	-292.5		-292.49	-292.59	-292.78	-292.96	-292.98	-292.93	-292.93	-293.63		-293.68	-292.95
1988	-293.65	-293.4	-291.99		-291.94	-292.1	-292.12	-292.05	-291.99	-292.38		-292.93	-292.45
1989	-292.9	-292.77	-292.75	-292.83		-293.1	-293.14	-293.04	-293.05		-293.72	-293.89	-293.12
1990	-293.63		-293.39	-293.37	-293.48	-293.6		-293.42	-293.45	-293.88	-293.99	-294.15	-293.64
1991	-294.28	-294.12	-294.04	-293.94	-294.12	-294.27	-294.23	-294.06	-294.24	-294.68	-294.82		-294.25
1992		-289.42	-282.41	-280.58	-280.76	-281.15	-281.77	-282.22	-283.12	-283.8	-284.48	-285.42	-283.19
1993	-284.19	-283.72	-283.61	-283.37	-283.63	-283.87		-284.06	-284.67	-285.05	-285.4	-285.8	-284.31
1994	-286.03	-285.12		-286.36	-286.73	-286.98	-287.02	-287.07	-287.34	-287.62	-287.77	-287.12	-286.83
1995	-286.83	-286.7	-286.7	-286.77		-287.01	-287.08	-287.03		-287.26	-287.6		-287.00
1996		-287.46	-287.42	-287.41	-287.45	-287.62	-287.49		-287.6				-287.49
1997								-285.55	-285.89	-286.08	-286.2	-286.19	-285.98
1998	-286.08	-285.8	-285.73	-285.3	-285.63	-285.92	-285.92	-287.8					-286.02
1999	-287.29		-287.65	-287.94	-288.16	-288.35	-288.39	-288.55	-288.87	-289.18	-289.3	-289.71	-288.49
2000	-289.45	-289.68	-289.62	-289.87	-290.06	-289.18	-289.75	-290.75	-290.96				-289.92
2001													
2002													
2003	-293.4	-293.2		-291.69	-292.23		-291.93			-292.8		-293.12	-292.62
2004	-292.89	-292.64			-293.3	-292.9				-294.22		-294.37	-293.39
2005		-293.7			-293.91			-293.93			-294.65		-294.05
2006		-294.45	-294.12										-294.28
Ave.	-290.10	-290.08	-289.64	-288.80	-289.55	-289.21	-289.35	-289.44	-289.54	-289.96	-290.15	-290.62	-289.92

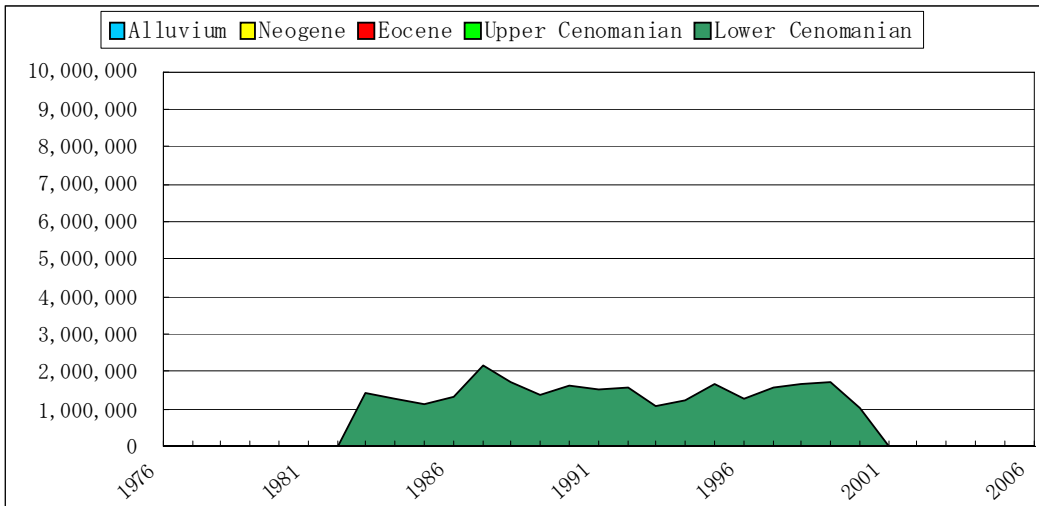


Annex 2.3
Groundwater Use

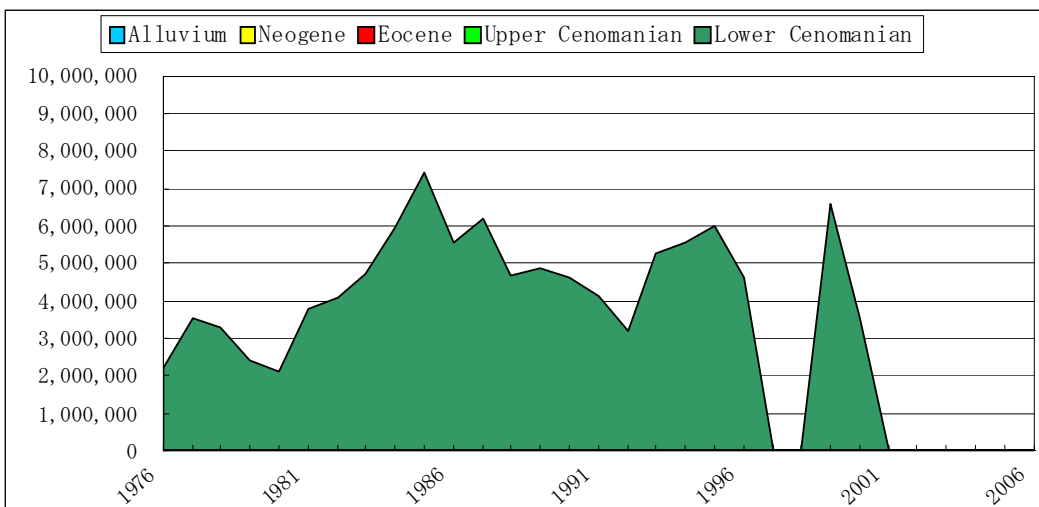
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 Basin North Eastern



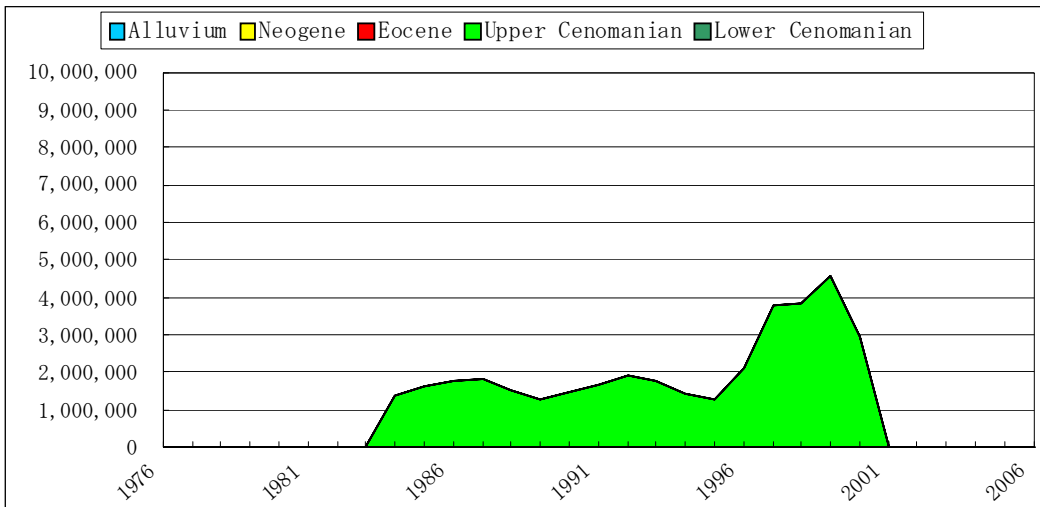
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 Basin Eastern



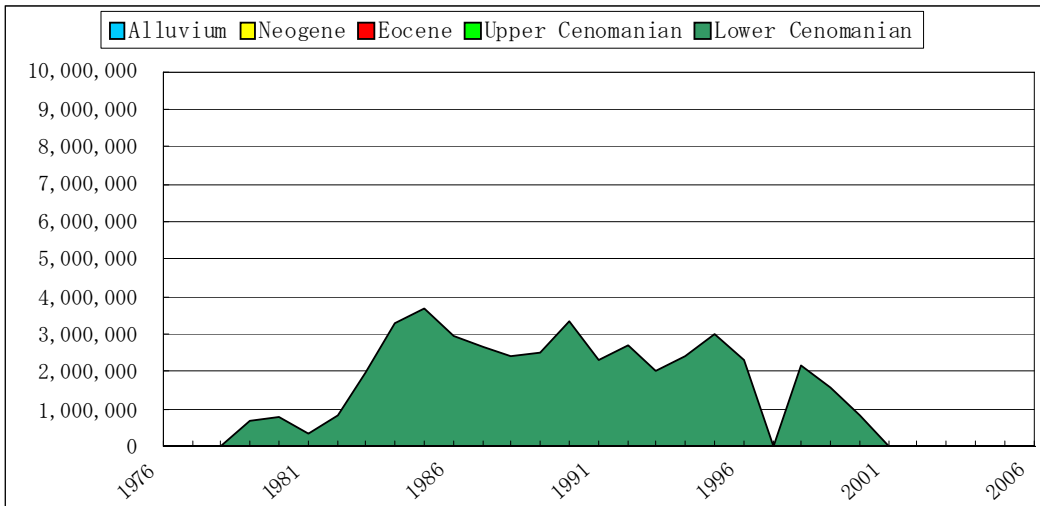
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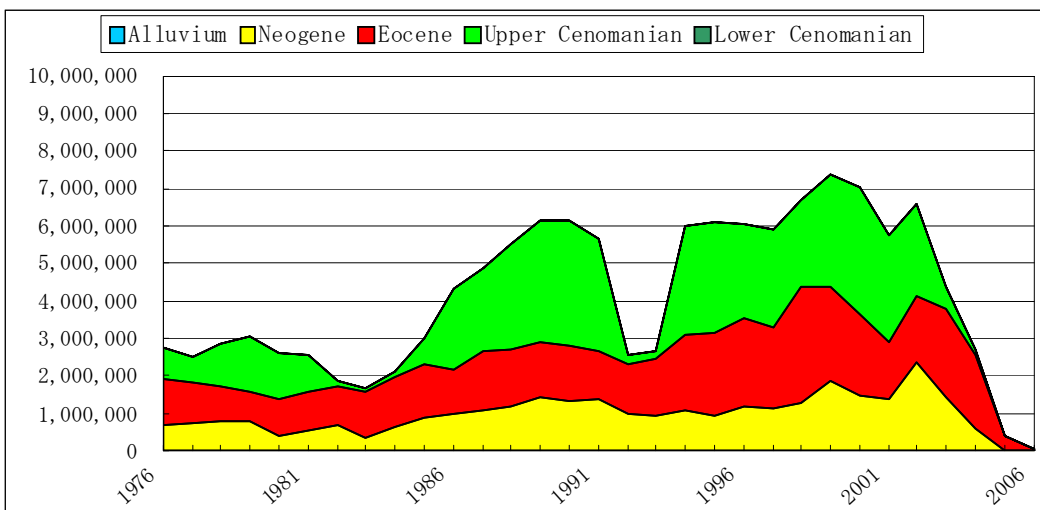
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 Basin Eastern



Mesh No. W18-15
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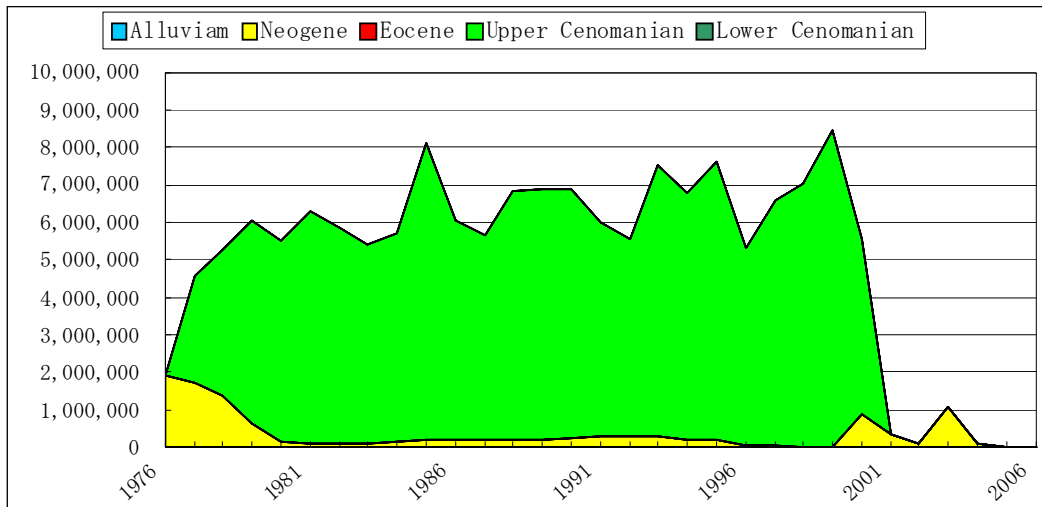


Mesh No. W18-18
 Basin North Eastern + Eastern



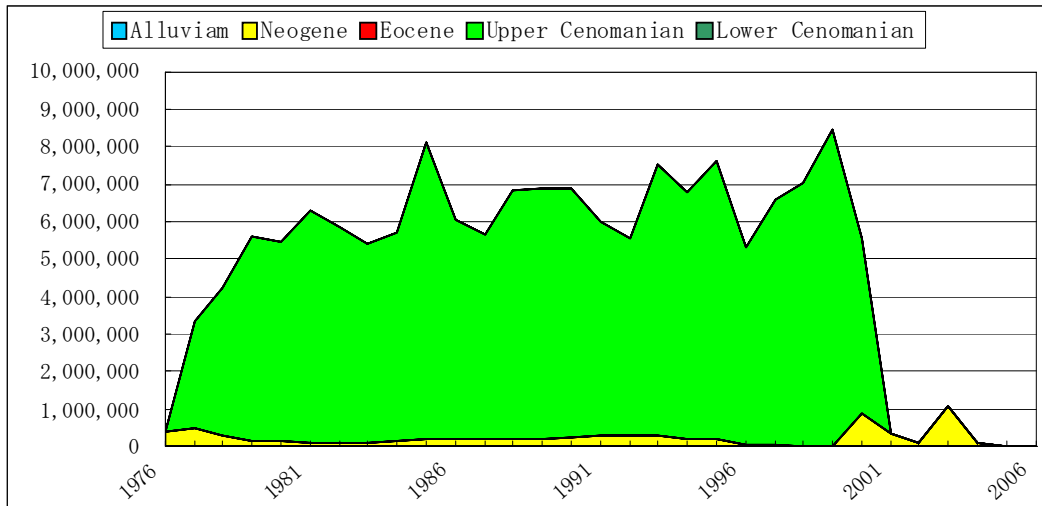
Mesh No. W19-19

Basin North Eastern + Eastern



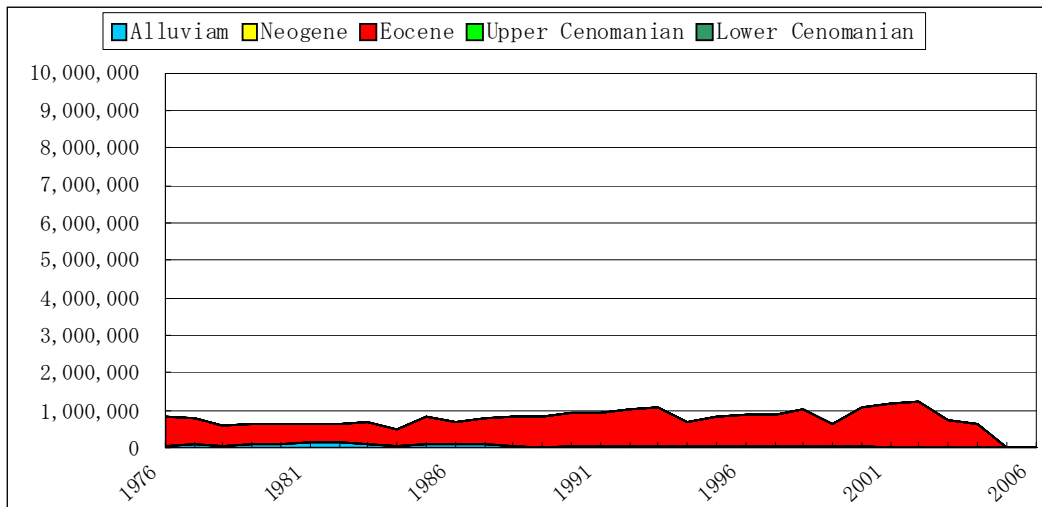
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Basin Eastern

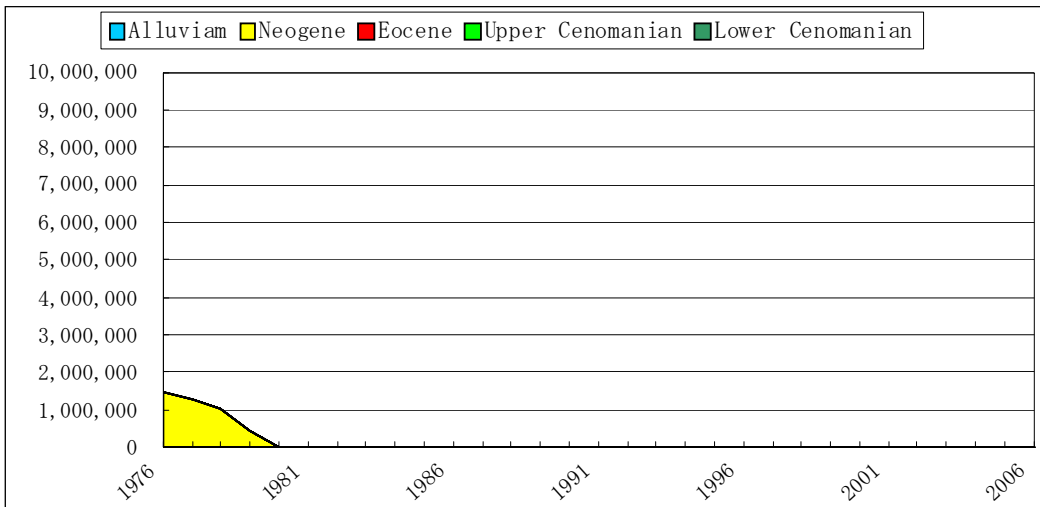


Mesh No. W20-17

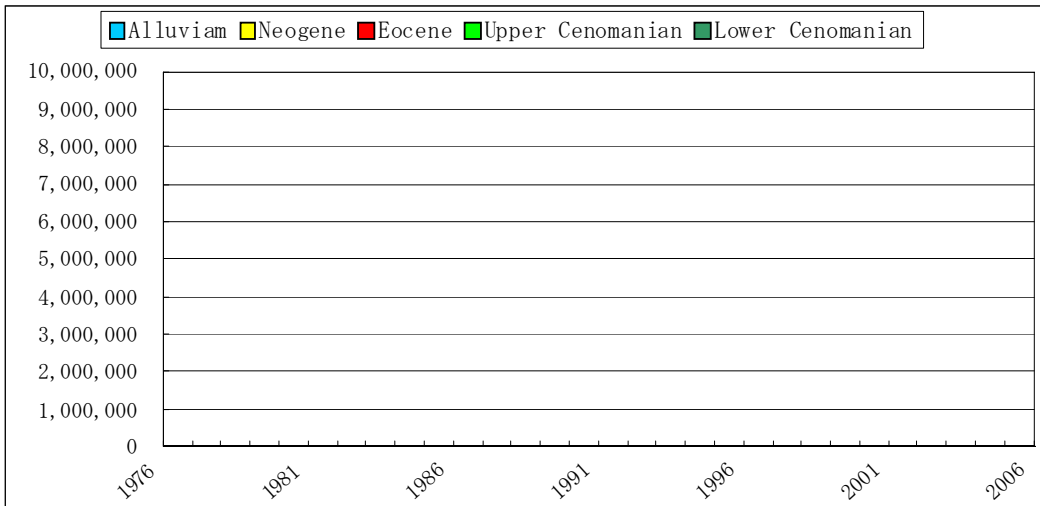
Basin Eastern



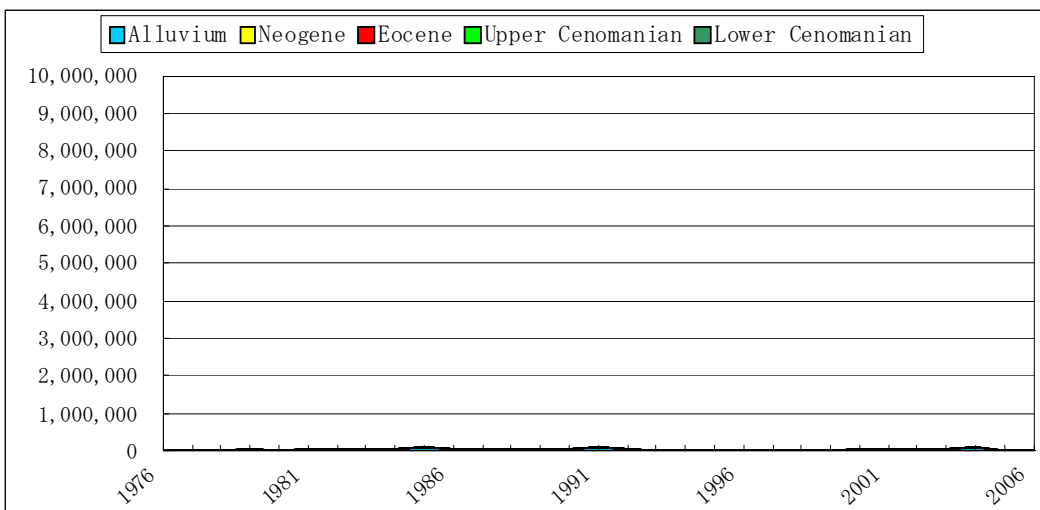
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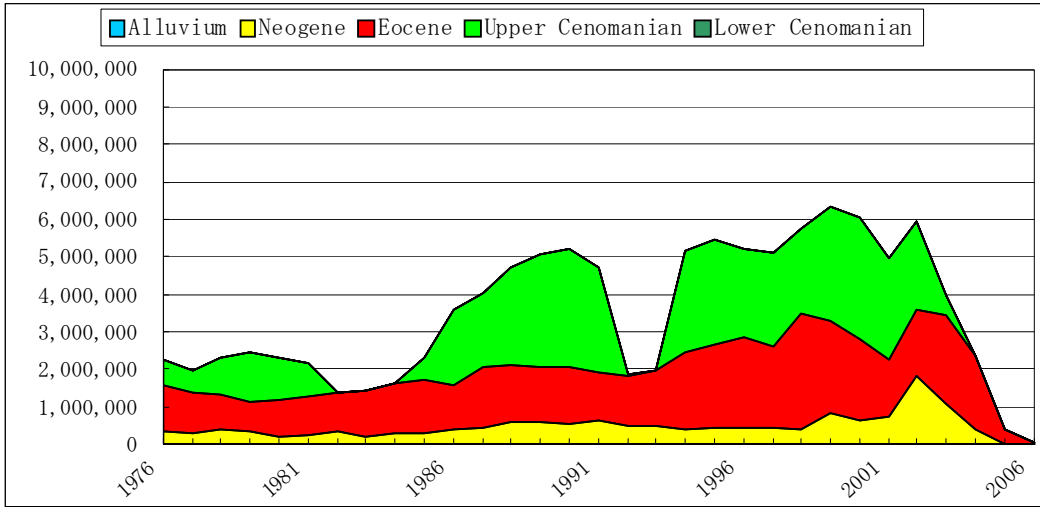
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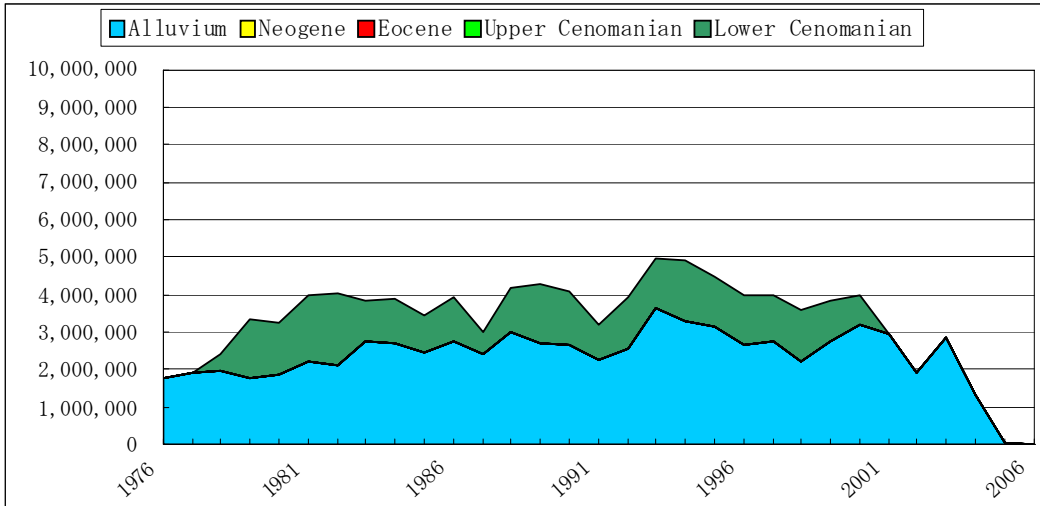
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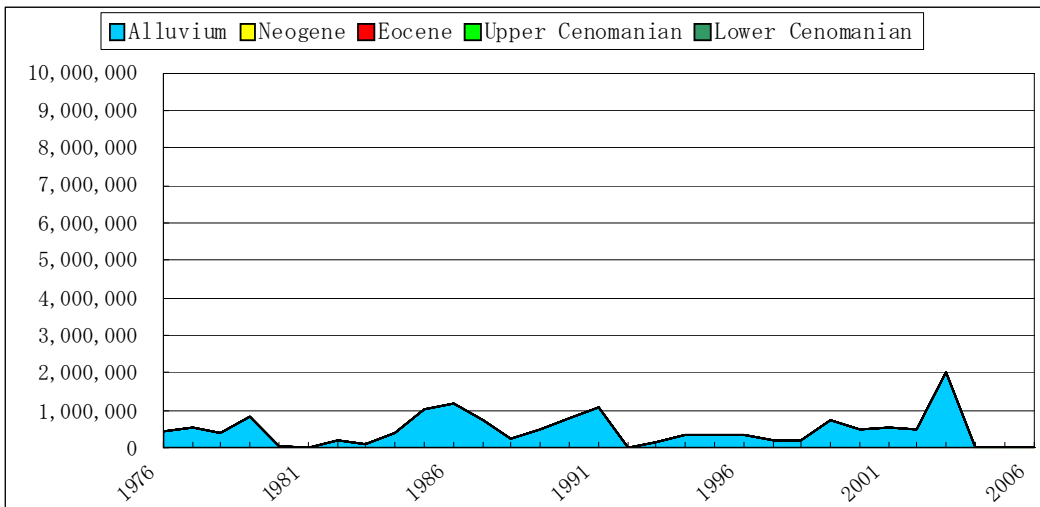
W18-18
North Eastern



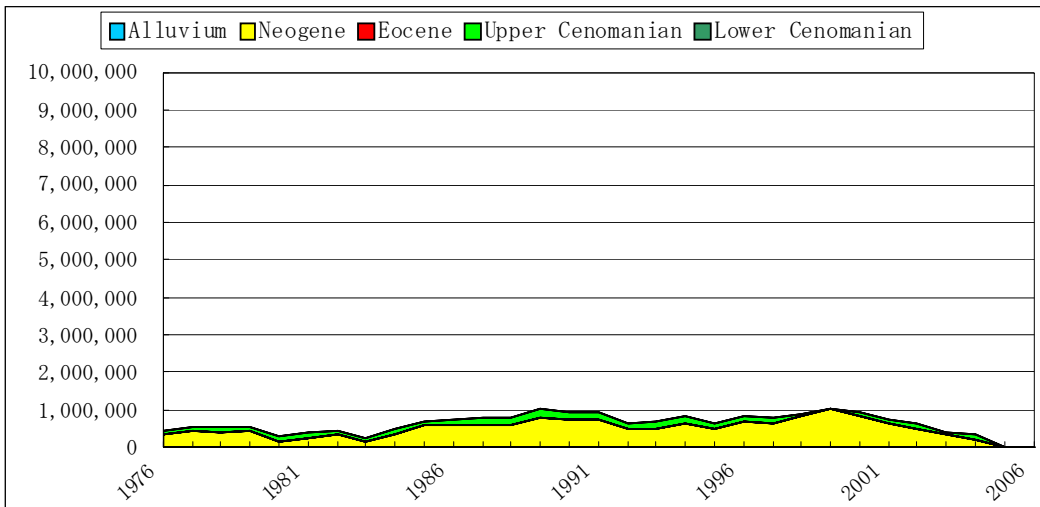
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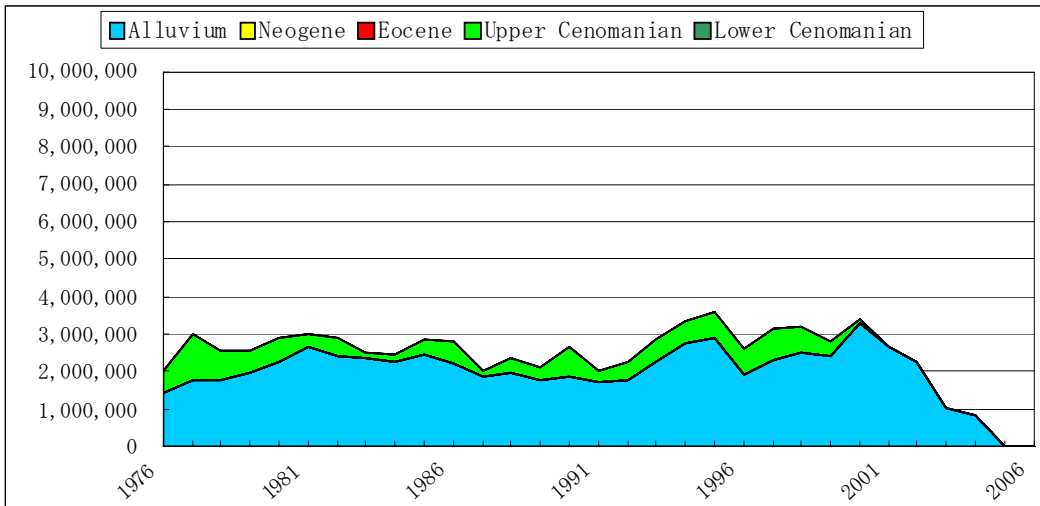
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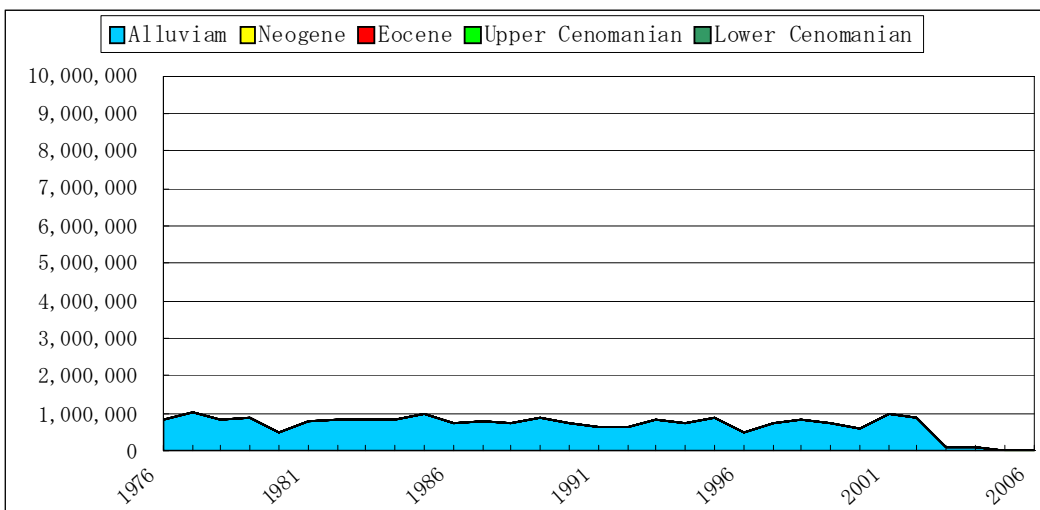
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Basin Eastern



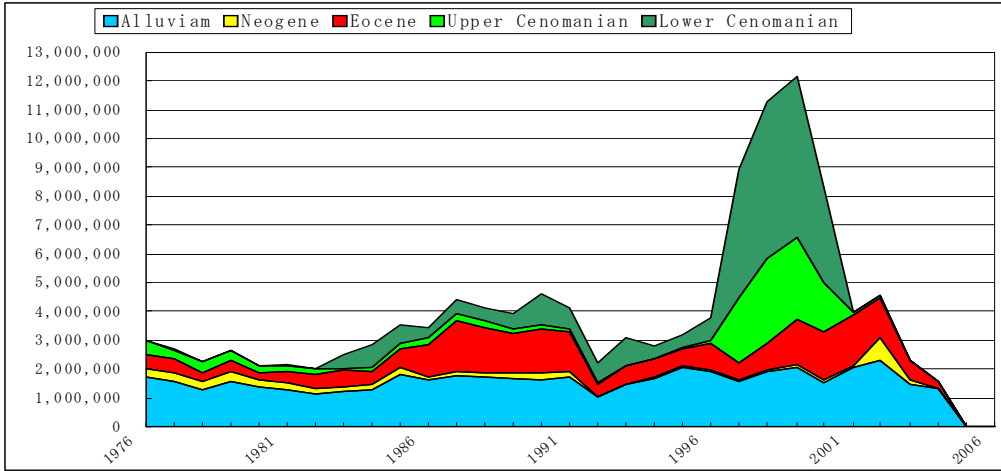
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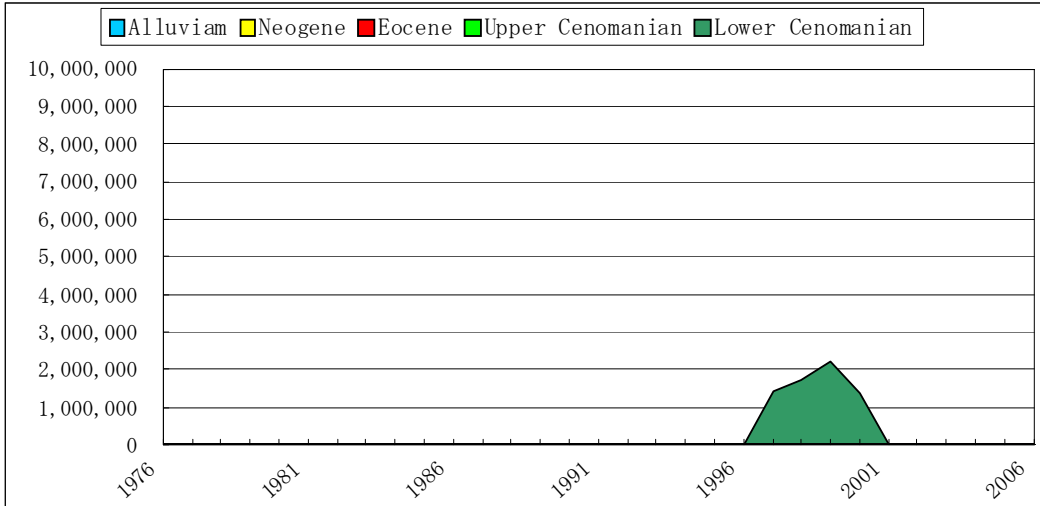
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Basin Eastern



Mesh No. W19-17
Basin Eastern

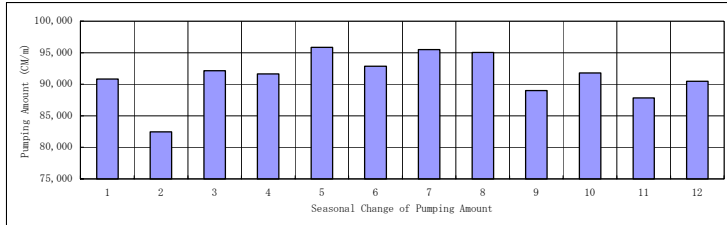
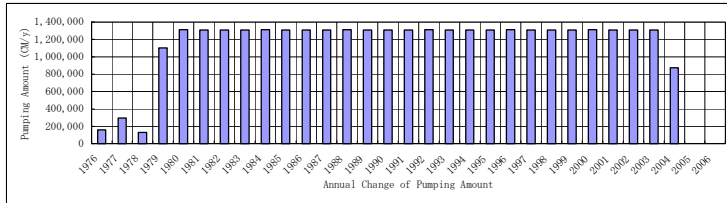


Mesh No. W19-18
Basin Eastern



PMD_Code
 PN_Name_E Western
 LOC_Name_E Upper Cenomanian
 GR_Governate_E

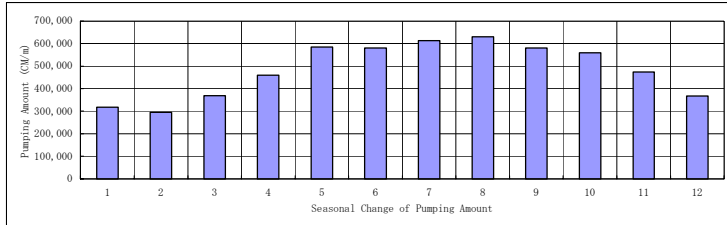
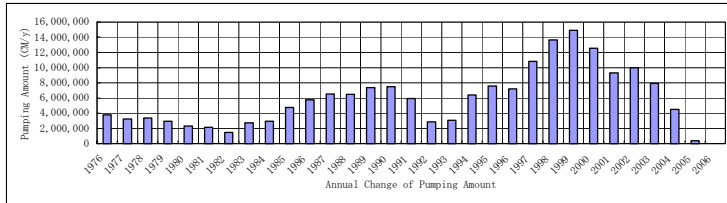
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1976	11,555	0	0	12,305	23,706	20,996	22,537	23,821	23,764	12,180	0	8,743	159,607
1977	8,197	0	0	21,264	47,063	50,028	37,624	24,067	35,964	43,875	23,301	4,440	295,823
1978	0	0	6,617	13,073	13,920	13,410	13,314	13,023	13,034	13,342	13,048	16,652	129,433
1979	19,650	24,441	74,354	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,103,229
1980	111,012	103,850	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,310,658
1981	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1982	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1983	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1984	111,012	103,850	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,310,658
1985	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1986	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1987	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1988	111,012	103,850	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,310,658
1989	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1990	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1991	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1992	111,012	103,850	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,310,658
1993	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1994	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1995	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1996	111,012	103,850	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,310,658
1997	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1998	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
1999	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
2000	111,012	103,850	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,310,658
2001	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
2002	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
2003	111,012	100,269	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,307,077
2004	111,012	103,850	111,012	107,431	111,012	107,431	110,663	110,110	0	0	0	0	872,521
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	90,797	82,459	92,138	91,608	95,839	92,827	95,466	95,043	88,985	91,764	87,810	90,488	1,170,757



PMD_Code
 PN_Name_E
 LOC_Name_E
 GR_Governate_E

North Eastern

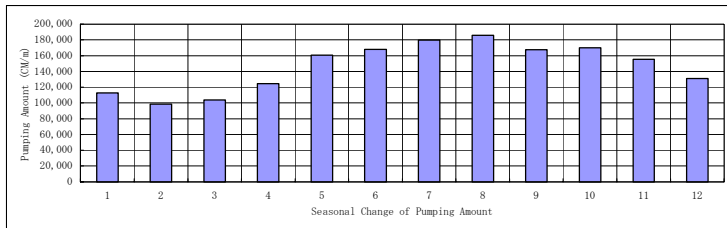
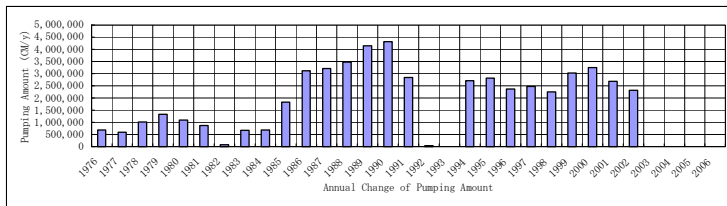
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1976	128,349	149,123	138,020	360,908	554,114	384,008	364,629	387,801	445,618	415,070	308,422	147,722	3,783,784
1977	66,324	140,649	165,463	241,143	392,040	344,738	333,477	409,079	408,227	330,181	291,092	109,100	3,231,513
1978	97,269	182,427	210,378	330,103	371,977	291,474	314,885	368,529	394,106	398,232	280,080	157,180	3,396,640
1979	182,779	271,895	340,423	297,548	359,769	328,774	292,540	287,730	211,455	190,226	153,955	23,206	2,940,300
1980	19,201	19,157	30,109	67,128	343,956	347,632	317,641	315,857	265,167	261,307	206,950	130,707	2,324,812
1981	36,290	9,271	152,298	209,453	284,006	307,280	320,634	361,379	195,595	134,853	122,904	39,012	2,172,975
1982	40,430	45,273	54,568	147,738	178,188	188,744	193,966	197,817	189,261	121,332	78,195	51,476	1,486,988
1983	12,308	10,725	63,504	98,748	178,434	182,236	333,460	437,312	442,011	385,882	314,019	287,468	2,746,107
1984	199,075	157,090	111,140	120,539	194,926	259,630	418,782	384,039	316,592	332,321	253,283	193,973	2,941,390
1985	207,146	194,229	254,560	367,614	486,254	435,736	415,872	523,749	483,826	496,658	440,874	449,784	4,756,302
1986	373,452	380,228	492,171	531,057	602,606	554,520	607,161	612,866	526,426	462,379	410,619	241,475	5,794,960
1987	258,712	260,056	306,375	515,757	686,936	667,123	724,339	711,535	688,898	718,750	613,175	364,686	6,516,342
1988	203,118	197,676	250,107	470,765	684,031	683,132	726,373	734,468	761,393	745,373	588,096	458,549	6,503,081
1989	381,865	374,276	413,830	665,021	824,519	765,504	785,530	792,739	717,936	664,907	549,781	434,173	7,370,081
1990	395,886	359,755	439,645	619,761	752,234	714,212	725,384	790,855	781,399	750,467	614,644	551,021	7,495,263
1991	494,071	343,426	388,868	449,761	593,125	595,809	599,007	649,356	623,833	580,869	439,764	200,922	5,958,811
1992	147,713	102,389	102,746	147,881	270,766	322,843	362,387	351,445	343,782	366,862	243,879	116,048	2,878,741
1993	92,591	110,821	194,180	240,701	294,722	305,619	343,891	347,807	339,354	358,762	281,088	200,467	3,110,003
1994	188,505	321,279	351,975	498,086	704,847	681,333	694,907	718,047	727,627	693,706	500,422	353,902	6,434,636
1995	293,370	276,202	441,067	544,425	735,897	813,394	841,969	851,118	797,921	811,888	684,866	492,765	7,584,882
1996	345,825	359,967	375,249	423,426	682,055	793,699	832,989	821,737	720,964	672,365	624,407	555,052	7,207,735
1997	470,277	325,004	547,708	752,393	963,630	1,114,252	1,273,873	1,342,044	1,252,646	1,078,876	894,070	820,866	10,835,639
1998	747,579	612,586	736,828	787,457	1,117,211	1,387,617	1,489,191	1,570,307	1,457,484	1,410,857	1,221,151	1,101,380	13,639,648
1999	1,087,264	936,557	1,201,221	1,332,553	1,360,752	1,220,221	1,303,280	1,402,464	1,379,466	1,407,410	1,215,546	1,048,513	14,895,247
2000	940,921	760,025	934,377	1,199,865	1,363,104	1,458,490	1,463,404	1,466,673	833,427	739,162	702,709	706,829	12,568,986
2001	710,169	630,400	695,800	818,056	883,748	805,786	862,657	864,258	819,527	802,024	728,161	711,124	9,331,710
2002	566,505	513,322	639,339	651,411	799,011	805,444	827,156	835,600	1,064,970	1,207,460	1,167,691	916,015	9,993,924
2003	798,445	721,178	978,807	969,553	1,038,222	715,090	737,257	518,606	393,913	384,186	363,628	311,216	7,930,101
2004	332,160	347,023	370,956	368,450	403,315	471,535	469,075	463,857	364,645	376,304	356,718	179,249	4,503,287
2005	14,290	25,972	35,185	36,596	39,049	38,908	39,722	38,958	36,021	33,170	31,637	31,119	400,627
2006	31,259	28,543	0	0	0	0	0	0	0	0	0	0	0
Ave.	318,166	295,694	368,287	460,126	585,272	580,154	613,401	630,904	580,113	559,092	473,607	367,258	6,024,484



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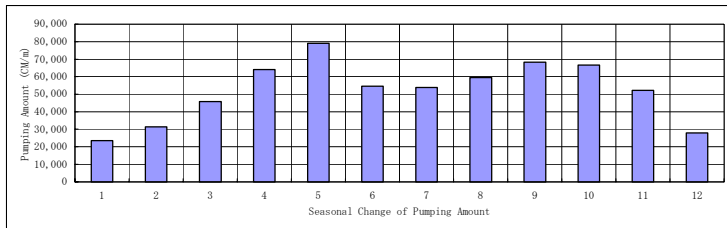
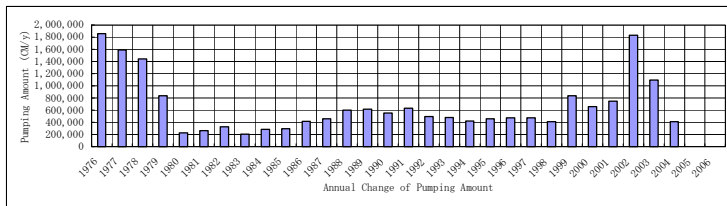
North Eastern
 Upper Cenomanian

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	45,184	7,093	6,219	6,018	54,836	81,835	84,935	83,879	88,191	84,383	85,686	58,237	686,496
1977	3,835	1,856	2,055	1,989	55,146	72,741	100,139	107,773	93,094	88,155	55,180	8,777	590,740
1978	7,204	6,507	7,204	77,923	78,066	96,367	126,981	134,673	129,429	128,426	128,112	101,543	1,022,435
1979	96,649	121,836	144,426	139,981	143,663	185,424	144,563	133,989	69,341	69,513	69,472	7,847	1,326,704
1980	5,713	5,344	5,713	5,529	189,420	189,236	155,992	154,674	105,792	107,754	88,102	90,463	1,103,732
1981	2,918	0	101,520	101,943	165,679	162,521	162,049	162,252	7,107	1,902	2,486	3,191	873,568
1982	3,322	2,281	2,659	3,365	5,772	18,253	17,503	6,206	6,006	6,206	6,006	6,206	83,785
1983	6,206	5,605	6,206	6,006	6,206	6,006	61,563	126,007	122,383	104,463	113,352	115,681	679,684
1984	83,347	35,927	0	0	13,966	60,934	124,279	76,503	40,239	78,446	87,814	94,708	696,163
1985	88,848	61,069	71,255	108,715	134,442	122,163	116,211	203,919	185,608	232,793	237,529	270,440	1,832,992
1986	246,899	249,653	293,606	281,472	291,896	268,989	292,909	270,734	244,321	258,915	282,535	144,345	3,126,274
1987	144,125	114,441	118,796	242,154	245,508	290,034	385,247	353,124	343,161	397,687	381,511	199,910	3,215,698
1988	112,893	117,917	116,448	267,125	327,206	340,511	383,702	378,722	418,796	384,616	337,034	285,907	3,470,877
1989	265,008	230,971	205,900	336,775	444,037	419,522	419,929	417,280	396,978	373,227	338,230	295,919	4,143,776
1990	298,428	249,454	265,267	363,856	430,809	394,126	382,224	411,009	417,054	398,781	356,266	346,702	4,313,976
1991	330,358	195,781	188,317	261,612	273,160	235,824	257,763	291,586	274,539	255,465	207,768	76,215	2,848,388
1992	35,292	0	3,536	6,630	3,315	0	0	0	0	0	0	0	48,773
1993	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	54,237	210,457	178,078	191,803	294,918	300,000	274,844	270,000	273,353	274,426	209,672	177,869	2,709,657
1995	121,453	92,425	161,287	179,457	269,964	307,573	289,350	264,517	273,614	308,448	271,225	271,056	2,810,369
1996	201,750	164,317	136,531	96,637	217,636	253,899	255,763	236,324	190,402	210,452	203,663	210,452	2,377,826
1997	199,026	126,104	143,947	150,350	193,840	265,786	275,552	277,770	264,988	267,896	196,647	117,653	2,479,559
1998	127,450	125,315	121,842	100,101	146,256	207,148	232,527	261,778	240,859	223,106	219,195	243,477	2,249,054
1999	238,065	194,656	229,547	236,631	220,820	172,000	237,334	331,700	309,488	287,088	280,035	295,644	3,033,008
2000	311,794	319,145	330,347	293,186	301,624	291,559	276,337	292,306	213,075	224,946	214,789	178,459	3,247,567
2001	186,418	172,264	158,359	196,980	237,979	235,224	271,550	272,500	252,961	261,010	216,745	222,691	2,684,681
2002	111,726	97,573	114,485	111,000	234,601	230,901	238,597	238,597	230,901	238,597	230,901	233,594	2,311,473
2003	161,056	145,470	104,657	96,962	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	112,555	98,499	103,813	124,652	160,670	168,019	179,608	185,736	167,474	169,894	155,482	130,871	2,075,664



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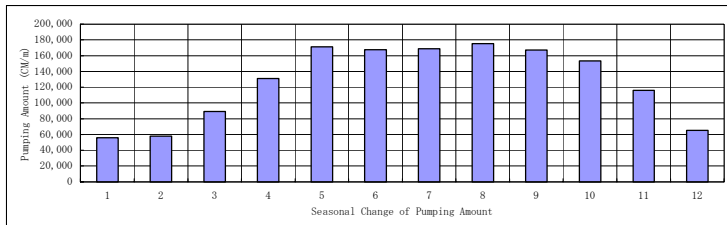
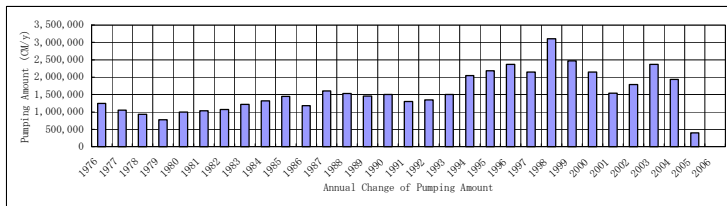
	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	67,746	123,427	104,559	271,068	322,227	136,468	130,784	128,072	182,759	190,761	145,674	51,672	1,855,217
1977	45,484	132,018	136,035	181,448	201,222	115,833	93,534	148,325	175,033	167,564	131,444	62,997	1,590,937
1978	58,320	142,300	150,551	177,158	173,569	101,709	84,741	104,019	149,007	162,829	96,719	41,946	1,442,868
1979	77,863	113,050	140,132	81,137	117,157	66,074	67,170	59,291	42,900	41,772	21,101	10,987	838,634
1980	4,205	2,712	6,791	10,592	31,710	36,540	30,743	29,046	26,536	19,290	17,777	10,079	226,021
1981	9,556	1,778	4,603	13,977	21,677	33,216	38,863	43,758	38,293	26,977	23,138	11,638	267,474
1982	9,624	5,861	10,799	27,834	32,162	43,670	46,072	52,091	45,441	27,767	25,243	2,534	329,098
1983	2,359	1,739	2,752	14,269	14,980	26,488	29,561	34,233	31,838	18,456	16,749	12,716	206,140
1984	12,504	10,875	12,531	16,677	24,414	40,080	39,832	34,741	32,632	27,325	22,991	9,495	284,097
1985	8,856	4,998	14,738	27,116	31,187	40,851	41,125	38,195	32,709	26,903	21,929	8,055	296,662
1986	12,851	20,704	26,122	44,876	39,910	28,936	42,301	68,324	59,006	40,167	32,013	4,337	419,547
1987	5,883	14,748	17,554	52,551	48,767	31,929	38,371	55,953	55,196	66,024	56,215	15,099	458,290
1988	15,099	6,922	23,380	72,417	74,194	70,814	73,176	73,824	68,448	56,445	54,625	11,813	601,157
1989	11,258	26,316	34,099	82,759	82,395	57,095	61,542	76,190	73,103	55,371	47,904	7,126	615,158
1990	7,694	8,423	15,059	58,180	58,193	40,199	45,372	83,524	78,081	68,197	61,527	30,600	555,049
1991	30,488	27,312	30,156	39,062	72,589	70,247	78,110	80,932	82,655	70,587	23,914	24,711	630,763
1992	16,831	15,167	19,753	21,706	70,028	66,964	62,089	62,023	60,531	56,662	21,386	22,099	495,239
1993	9,289	10,824	41,782	41,755	49,515	48,624	52,453	52,536	50,954	51,224	36,678	33,221	478,855
1994	13,016	11,755	25,047	32,279	57,143	55,651	60,523	60,062	57,297	32,121	9,961	10,226	425,081
1995	10,108	16,282	54,455	49,082	44,716	43,571	53,177	53,084	49,521	44,754	20,456	18,678	457,884
1996	8,430	8,345	17,657	25,325	40,897	43,243	49,731	56,196	60,101	62,104	60,101	44,384	476,514
1997	11,852	11,361	22,024	24,540	63,802	59,347	55,547	60,047	66,434	51,200	31,535	19,022	476,711
1998	6,305	10,530	15,674	22,292	37,324	38,284	45,714	49,054	53,347	50,669	38,493	45,932	413,618
1999	67,036	48,196	28,742	49,824	112,336	99,725	77,509	82,487	87,453	83,928	59,853	43,426	840,515
2000	14,260	22,215	44,829	65,848	108,141	98,254	83,353	67,676	37,906	39,170	37,906	39,170	658,728
2001	39,170	35,379	43,721	62,252	71,765	69,451	71,765	71,765	69,451	71,765	69,451	71,765	747,700
2002	71,765	64,820	71,765	69,451	71,765	69,451	71,765	71,765	287,475	409,702	396,486	177,020	1,833,230
2003	49,605	44,806	274,775	307,817	318,077	8,897	7,524	7,524	13,991	20,525	19,862	20,525	1,093,928
2004	31,433	29,404	31,433	39,879	58,910	51,063	36,954	39,762	46,294	27,850	19,505	0	412,487
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	23,513	31,363	45,855	63,973	79,057	54,602	53,852	59,500	68,206	66,713	52,279	27,783	669,917



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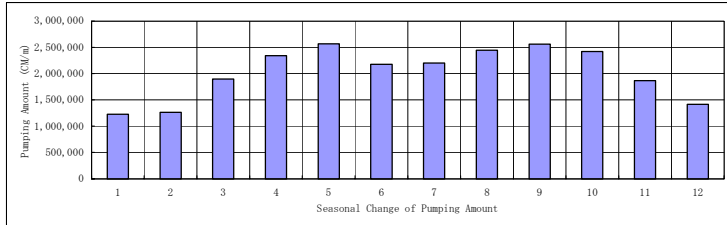
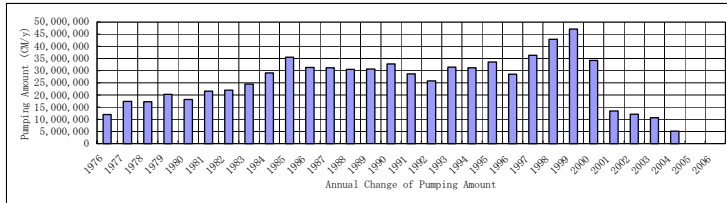
North Eastern
 Lower Cenomanian

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	15,419	18,603	27,242	83,822	177,051	165,705	148,910	175,850	174,668	139,926	77,062	37,813	1,242,071
1977	17,005	6,775	27,373	57,706	135,672	156,164	139,804	152,981	140,100	74,462	104,468	37,326	1,049,836
1978	31,745	33,620	52,623	75,022	120,342	93,398	103,163	129,837	115,670	106,977	55,249	13,691	931,337
1979	8,267	37,009	55,865	76,430	98,949	77,276	80,807	94,450	99,214	78,941	63,382	4,372	774,962
1980	9,283	11,101	17,605	51,007	122,826	121,856	130,906	132,137	132,839	134,263	101,071	30,165	995,059
1981	23,816	7,493	46,175	93,533	96,650	111,543	119,722	155,369	150,195	105,974	97,280	24,183	1,031,933
1982	27,484	37,131	41,110	116,539	140,254	126,821	130,391	139,520	137,814	87,359	46,946	42,736	1,074,105
1983	3,743	3,381	54,546	78,473	157,248	149,742	151,914	169,261	179,538	141,653	78,876	51,439	1,219,814
1984	9,807	28,338	81,654	103,862	145,831	145,223	157,547	159,654	157,733	145,898	105,727	80,426	1,321,700
1985	45,423	46,822	81,353	147,790	216,802	158,675	137,982	160,680	172,555	143,676	78,107	56,740	1,446,605
1986	23,549	33,731	62,177	94,277	166,310	158,191	155,639	151,512	138,346	111,189	45,644	40,685	1,181,250
1987	27,071	35,172	57,340	104,086	271,796	228,194	182,691	185,108	186,003	149,348	87,105	85,554	1,599,468
1988	20,943	28,693	56,210	70,814	220,208	211,398	207,072	205,389	183,569	189,685	67,853	70,115	1,531,949
1989	32,085	41,979	118,511	136,613	185,584	180,013	191,556	186,766	138,981	130,527	61,974	51,322	1,455,911
1990	28,198	41,791	91,442	124,951	185,803	177,152	169,658	168,433	162,629	161,822	103,670	90,024	1,505,573
1991	49,530	44,737	107,662	130,978	135,344	130,978	140,112	153,816	147,338	131,316	109,634	23,148	1,304,593
1992	23,621	26,216	32,711	91,061	135,698	190,135	181,565	160,920	156,287	178,184	139,150	30,775	1,346,323
1993	33,927	57,872	91,867	138,376	147,735	156,175	161,381	161,381	157,553	172,066	145,517	81,698	1,505,618
1994	78,167	61,430	107,180	233,678	237,425	193,242	223,167	251,683	231,727	221,106	158,622	49,520	2,046,947
1995	79,096	96,036	122,842	171,232	211,229	250,360	258,981	267,280	244,667	226,585	219,277	39,950	2,187,535
1996	39,950	106,336	134,044	219,670	253,865	292,958	300,137	296,558	258,697	186,915	168,466	109,918	2,367,514
1997	99,148	38,975	69,556	140,782	173,953	235,707	250,356	269,877	274,677	304,769	207,605	79,483	2,144,888
1998	81,223	76,330	155,883	234,725	282,804	344,507	367,011	387,047	367,136	364,027	276,152	167,349	3,104,194
1999	169,170	159,652	227,881	273,305	262,837	219,912	220,076	208,728	205,197	221,139	186,233	113,520	2,467,650
2000	101,586	74,733	134,836	260,469	269,801	262,632	261,681	248,244	200,964	112,974	109,328	112,974	2,150,222
2001	112,974	102,040	136,818	188,816	190,076	113,319	117,094	117,094	113,319	117,094	113,319	118,311	1,540,274
2002	143,474	128,740	143,015	140,348	144,555	132,249	125,253	125,253	159,511	184,615	178,660	184,615	1,790,288
2003	189,702	171,344	201,293	195,175	203,101	205,828	212,689	212,689	205,828	212,689	205,828	148,156	2,364,322
2004	158,192	184,280	196,988	190,633	175,825	161,931	166,691	162,384	158,494	183,268	177,356	18,025	1,934,067
2005	14,290	25,972	35,185	36,596	39,049	38,908	39,722	38,958	36,021	33,170	31,637	31,119	400,627
2006	31,259	28,543	0	0	0	0	0	0	0	0	0	0	0
Ave.	55,781	57,899	89,322	130,993	171,117	167,426	168,828	175,124	167,331	153,278	116,168	65,327	1,567,221



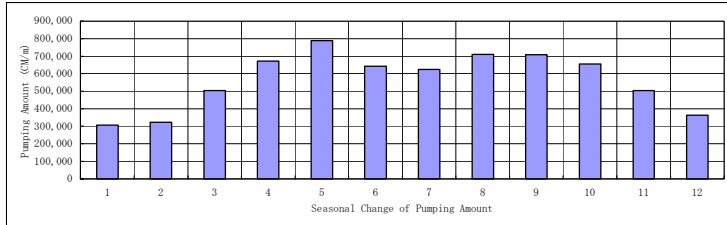
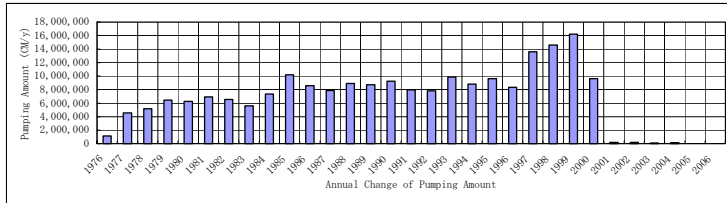
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	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	405,882	471,002	568,670	1,179,250	1,464,891	862,897	892,272	1,067,666	1,406,246	1,545,438	1,278,029	906,193	12,048,436
1977	830,657	1,034,195	1,401,993	1,643,054	1,807,931	1,531,007	1,630,841	1,800,423	1,876,060	1,765,860	1,342,989	785,917	17,450,927
1978	784,379	1,178,047	1,546,431	1,735,671	1,775,717	1,428,183	1,588,314	1,742,127	1,747,865	1,806,902	1,032,909	892,359	17,258,904
1979	995,980	1,332,894	1,916,117	2,011,955	2,008,822	1,622,365	1,688,205	1,718,452	2,149,728	2,331,702	1,651,977	852,578	20,280,775
1980	488,092	516,177	934,771	1,629,080	2,108,502	1,689,947	1,594,653	1,656,902	2,152,960	2,564,130	1,935,106	936,703	18,207,023
1981	584,218	820,477	1,866,955	2,020,244	2,096,737	1,883,625	1,789,610	1,940,567	2,242,101	2,453,372	2,044,076	1,797,278	21,539,260
1982	1,448,967	1,147,396	1,496,018	2,050,000	2,287,659	1,716,589	1,960,276	2,101,165	2,352,727	2,493,973	1,710,941	1,232,090	21,997,801
1983	1,098,472	889,450	1,225,623	2,386,765	2,712,626	2,215,487	2,136,887	2,351,278	2,727,735	2,757,011	2,101,869	1,863,779	24,466,982
1984	1,746,653	1,993,775	2,086,641	2,591,206	2,804,117	2,435,448	2,604,143	2,738,514	2,829,453	2,661,370	2,365,164	2,285,255	29,141,739
1985	2,203,881	2,078,435	3,067,496	3,087,858	3,173,777	2,564,253	2,850,661	3,114,223	3,309,472	3,690,837	3,707,384	2,649,957	35,498,234
1986	2,055,879	2,005,787	2,963,185	2,956,531	2,892,781	2,801,515	2,934,242	3,136,832	3,317,307	3,157,836	1,800,130	1,301,067	31,323,092
1987	1,409,423	1,823,894	2,491,967	3,316,018	3,372,778	2,911,115	2,989,822	2,968,017	2,972,755	2,956,045	2,424,847	1,568,910	31,205,591
1988	1,074,046	933,714	1,980,038	3,116,703	3,423,151	2,845,186	2,890,484	3,503,671	3,469,861	3,268,135	2,534,367	1,514,025	30,553,581
1989	1,248,149	1,573,031	2,522,187	3,495,719	3,363,294	2,284,821	2,405,971	2,782,510	3,278,856	3,315,499	2,611,993	1,801,449	30,683,479
1990	1,259,211	1,241,800	2,313,914	3,076,954	3,350,135	2,779,025	2,842,324	3,252,395	3,473,310	3,707,298	3,070,065	2,484,729	32,851,160
1991	1,937,571	1,573,992	2,220,553	2,696,631	2,925,010	2,241,988	2,144,326	2,891,032	3,430,624	3,237,614	2,071,133	1,358,861	28,729,335
1992	830,995	890,221	1,963,712	2,797,828	3,125,013	2,119,847	1,917,845	2,695,602	2,978,288	3,021,338	2,045,739	1,409,021	25,794,549
1993	1,236,364	1,388,751	2,422,777	2,884,971	3,066,944	2,611,190	2,498,070	3,045,528	3,477,371	3,681,211	2,865,480	2,360,330	31,478,987
1994	1,856,517	1,535,688	2,496,265	3,212,999	3,366,530	2,921,680	2,930,028	3,447,729	3,707,252	2,492,895	1,803,189	1,403,350	31,174,122
1995	1,533,837	1,713,221	2,647,008	2,955,642	3,073,249	2,953,016	3,236,620	3,273,478	3,998,848	3,817,374	2,496,250	1,848,238	33,546,781
1996	1,584,359	1,625,162	2,249,584	2,805,553	3,278,684	3,007,123	2,987,571	3,495,851	2,385,917	1,880,168	1,790,419	1,533,229	28,623,620
1997	1,300,640	1,439,019	1,988,836	3,542,155	4,513,858	4,377,570	4,024,471	4,468,624	4,846,776	2,681,251	1,939,875	1,242,762	36,365,837
1998	1,070,308	1,245,720	3,238,909	3,714,617	4,496,757	4,209,479	3,889,901	4,657,838	5,203,995	4,635,830	3,454,026	3,066,570	42,883,950
1999	2,755,690	2,895,132	4,167,007	4,102,280	4,755,924	4,148,405	3,731,373	4,161,892	4,758,537	4,785,162	3,911,177	2,989,603	47,162,182
2000	2,343,002	2,032,175	3,114,960	3,944,274	4,681,002	4,006,245	4,490,036	4,213,959	1,821,815	1,213,605	1,174,458	1,213,605	34,249,136
2001	1,213,605	1,096,162	1,225,009	1,141,405	1,124,511	1,088,241	1,124,511	1,124,511	1,088,241	1,119,103	1,076,013	1,111,875	13,533,187
2002	1,076,123	962,187	1,075,849	1,041,144	1,075,849	1,041,144	1,075,849	1,075,849	1,041,622	951,520	908,168	885,098	12,210,402
2003	1,170,998	1,384,156	1,162,122	1,023,066	969,223	883,991	948,677	938,710	705,573	529,144	505,336	463,606	10,684,602
2004	424,154	403,152	499,626	504,066	536,373	361,620	385,946	457,299	588,521	458,381	322,020	185,511	5,126,669
2005	95,295	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	1,227,821	1,265,317	1,898,523	2,343,988	2,566,834	2,178,807	2,199,482	2,445,892	2,559,349	2,418,710	1,870,165	1,417,547	26,071,384



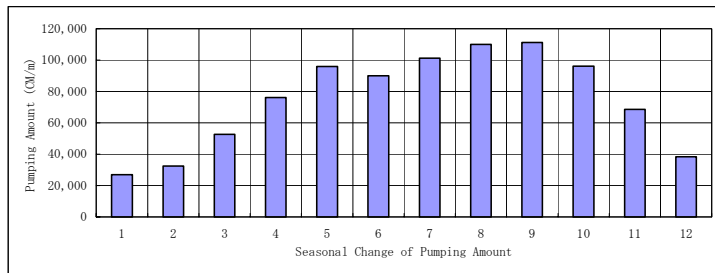
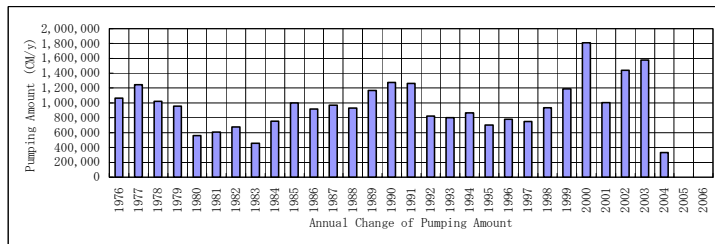
PMD_Code
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 LOC_Name_E Upper Cenomanian
 GR_Governate_E

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	7,845	8,805	10,075	74,036	118,947	123,187	144,940	161,953	145,806	139,599	117,005	99,624	1,151,822
1977	78,959	76,697	99,113	181,804	642,199	645,534	669,013	658,745	502,251	438,742	326,168	218,150	4,537,375
1978	148,978	374,619	453,649	488,195	700,299	584,353	631,949	667,493	481,933	369,109	99,266	184,742	5,184,585
1979	216,334	434,480	720,444	736,367	753,135	544,499	529,673	476,769	568,651	685,818	555,939	244,801	6,466,910
1980	89,846	136,025	218,063	746,210	1,020,337	651,397	547,195	604,560	732,213	812,182	548,134	180,144	6,286,306
1981	92,003	172,457	741,388	771,162	775,281	608,990	557,786	658,379	815,462	778,853	518,015	432,779	6,922,555
1982	413,074	269,309	409,677	681,717	761,738	482,830	684,990	670,409	751,231	725,259	398,540	283,341	6,532,115
1983	266,682	147,995	257,009	590,360	757,736	549,740	428,435	542,150	749,745	565,243	377,853	360,633	5,593,581
1984	329,527	609,056	439,529	853,328	951,480	665,130	701,298	785,809	686,727	384,424	501,602	456,401	7,364,311
1985	569,105	329,862	785,920	913,298	1,006,251	766,755	832,107	1,000,599	811,014	866,193	1,490,230	823,538	10,194,872
1986	467,353	479,815	726,945	782,774	804,153	749,465	794,567	956,800	993,159	1,042,898	434,407	368,740	8,601,076
1987	379,326	602,599	720,091	992,053	1,008,692	799,883	723,317	392,396	517,206	702,349	630,641	393,201	7,861,754
1988	227,235	275,987	534,456	970,558	1,151,962	915,981	836,028	1,094,974	1,030,687	885,954	653,557	361,738	8,939,117
1989	317,398	410,313	632,590	1,059,135	1,125,087	758,857	726,590	726,520	1,012,303	976,564	653,023	333,911	8,732,291
1990	233,595	331,038	659,121	946,036	1,044,648	799,900	781,911	895,418	984,029	1,003,310	874,602	676,519	9,230,127
1991	409,983	385,230	571,289	720,026	895,975	669,106	507,284	810,788	1,005,359	985,571	577,666	422,184	7,960,461
1992	297,643	229,649	573,939	806,016	971,509	423,318	444,885	909,228	1,007,925	1,051,269	643,274	452,633	7,811,288
1993	382,501	390,108	752,181	868,242	905,798	811,484	805,385	1,057,647	1,182,349	1,136,997	852,328	694,000	9,839,020
1994	525,483	454,308	787,771	1,009,923	1,083,520	929,654	854,388	1,078,538	1,027,282	397,448	405,687	266,445	8,820,447
1995	358,935	397,647	727,185	788,089	804,899	899,540	1,036,425	1,065,468	1,250,553	1,139,433	689,634	471,447	9,629,255
1996	481,537	549,352	731,005	811,584	1,002,399	1,003,704	947,168	1,166,229	495,605	393,407	380,715	380,253	8,342,858
1997	386,942	567,850	676,983	1,141,048	1,449,321	1,486,213	1,303,686	1,583,270	1,623,796	1,459,367	1,137,252	788,053	13,603,781
1998	698,666	637,726	835,497	1,057,660	1,481,418	1,335,646	1,208,956	1,576,053	1,779,560	1,624,416	1,275,237	1,098,612	14,609,447
1999	930,775	992,584	1,560,633	1,439,853	1,562,707	1,369,996	1,170,151	1,223,253	1,713,428	1,658,519	1,409,656	1,187,311	16,218,866
2000	1,144,866	686,862	965,025	1,352,100	1,575,636	1,246,816	1,399,305	1,175,305	12,955	13,387	12,955	13,387	9,598,599
2001	13,387	12,092	13,447	15,224	19,778	19,141	19,778	19,778	19,141	19,778	19,141	19,778	210,463
2002	19,778	17,864	19,778	19,141	19,778	19,141	19,778	19,778	19,141	19,778	16,445	4,703	215,103
2003	587	529	5,704	6,426	6,641	14,461	21,892	21,892	14,264	8,828	8,544	8,778	118,546
2004	8,724	8,162	8,724	13,705	24,813	24,830	27,612	26,367	22,088	11,300	1,407	0	177,732
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	306,357	322,226	504,427	672,131	787,940	641,921	624,403	710,534	708,250	654,710	503,514	362,124	7,267,402



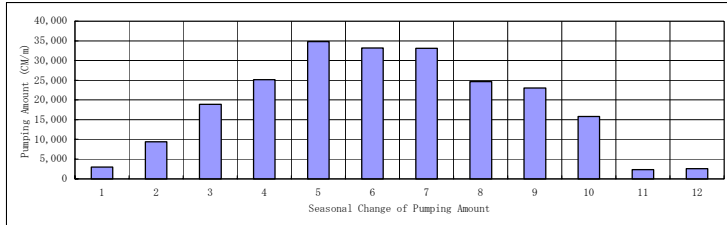
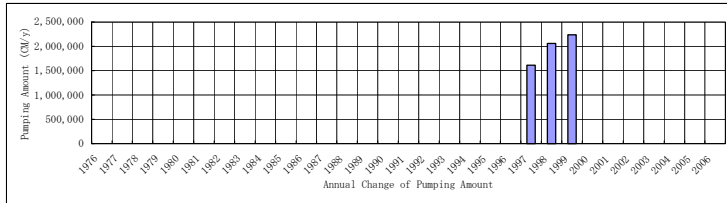
PMD_Code
 PN_Name_E Eastern
 LOC_Name_E Neogene
 GR_Governate_E

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	28,564	33,111	32,192	77,499	128,980	89,330	108,277	119,066	177,163	136,425	99,376	34,617	1,064,600
1977	18,694	44,847	63,920	103,316	165,831	124,892	129,272	144,312	159,874	146,173	98,677	43,982	1,243,790
1978	21,873	67,454	93,601	109,360	122,660	96,246	97,532	106,366	104,144	120,877	58,322	21,080	1,019,515
1979	21,899	41,910	65,037	78,112	107,242	101,061	105,849	112,117	118,901	109,412	61,714	32,016	955,270
1980	6,491	2,371	16,440	38,098	56,904	49,347	61,235	69,365	85,876	85,849	77,302	13,588	562,866
1981	6,349	8,055	26,895	41,516	44,263	59,361	66,540	80,414	92,688	86,367	66,910	27,515	606,873
1982	26,522	9,848	20,734	50,542	57,378	77,166	81,070	99,415	103,171	82,410	57,619	11,033	676,908
1983	4,767	3,364	9,608	42,082	41,006	45,042	46,960	59,800	70,932	66,418	44,600	22,115	456,694
1984	20,802	21,251	28,194	46,159	57,213	82,626	81,761	89,599	114,521	99,952	72,869	38,623	753,570
1985	37,981	28,564	56,812	81,442	85,516	95,804	102,052	111,710	118,984	127,911	109,800	43,533	1,000,109
1986	39,115	39,881	61,873	96,029	102,269	93,351	97,463	116,507	115,302	85,129	52,873	17,397	917,189
1987	19,160	39,615	44,204	111,151	98,118	95,605	106,910	131,509	133,293	85,050	76,550	27,869	969,034
1988	16,234	15,098	36,477	99,188	101,998	94,179	94,144	107,762	127,537	114,207	95,392	29,667	931,883
1989	23,873	24,484	60,716	148,604	147,440	108,551	114,418	134,442	154,638	123,487	104,923	20,479	1,166,055
1990	14,616	16,886	51,556	106,390	122,683	145,048	147,281	155,380	168,442	153,976	127,219	67,741	1,277,218
1991	55,291	48,080	60,444	96,596	174,558	142,524	120,184	134,029	164,159	152,671	63,851	51,567	1,263,954
1992	25,306	21,159	61,907	80,246	126,595	82,513	65,405	80,016	91,873	106,346	51,150	28,439	820,955
1993	16,608	28,523	71,628	73,884	92,998	73,580	61,146	75,381	81,581	93,849	72,542	58,892	800,612
1994	26,858	21,374	52,114	70,841	110,578	99,447	88,366	102,227	135,786	95,849	36,438	26,762	866,640
1995	23,405	26,910	59,213	52,267	51,147	41,438	73,997	84,815	109,895	99,233	45,878	35,288	703,486
1996	17,582	14,181	22,929	41,436	84,721	80,902	83,878	105,770	96,769	94,694	78,770	59,114	780,746
1997	15,218	15,224	23,781	42,127	118,042	100,627	87,065	94,515	106,668	79,068	44,852	24,593	751,780
1998	4,200	20,035	35,672	58,148	87,511	92,088	115,573	123,273	132,808	119,957	76,595	68,487	934,347
1999	32,447	44,074	77,998	94,369	144,553	138,463	138,884	132,692	119,377	118,381	84,373	62,610	1,188,221
2000	22,020	34,225	71,271	100,303	146,919	155,538	378,152	356,040	133,879	138,342	133,879	138,342	1,808,910
2001	138,342	124,955	149,686	136,489	57,538	55,683	57,538	57,538	55,683	57,538	55,683	57,538	1,004,211
2002	57,538	109,696	132,101	127,840	132,101	127,840	132,101	132,101	128,318	132,844	128,558	98,126	1,439,164
2003	77,897	90,044	130,864	128,921	168,657	203,529	251,570	251,570	201,403	29,481	23,993	19,149	1,577,078
2004	14,501	13,565	14,733	26,189	36,664	36,903	39,815	40,165	41,872	36,424	23,464	6,959	331,254
2005	3,068	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	27,007	32,541	52,665	76,101	95,874	89,958	101,111	109,932	111,146	96,075	68,522	38,294	961,136



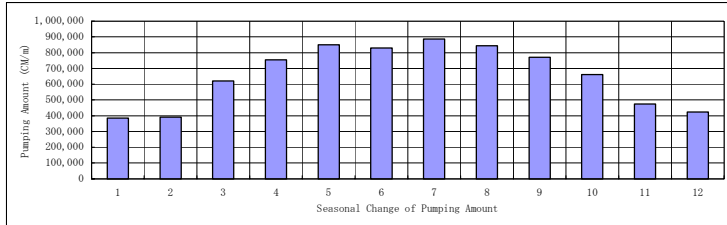
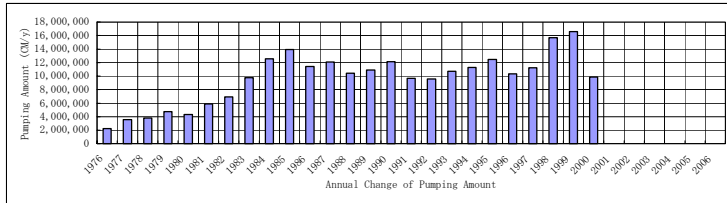
PMD_Code
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1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0	0	0	0	0	0	0
1996	0	0	0	0	0	0	0	0	0	0	0	0	0
1997	0	2,164	33,845	149,966	284,381	262,347	248,138	237,988	209,684	121,636	31,490	32,495	1,614,134
1998	15,167	128,315	223,495	240,456	273,448	254,037	236,972	236,972	229,328	167,260	20,190	34,551	2,060,191
1999	73,902	116,178	213,200	221,452	260,100	260,673	290,972	288,365	275,570	200,076	21,530	12,601	2,234,619
2000	2,311	45,490	114,243	167,169	260,489	251,177	251,100	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	2,948	9,424	18,864	25,130	34,788	33,169	33,135	24,623	23,051	15,773	2,362	2,569	1,969,648



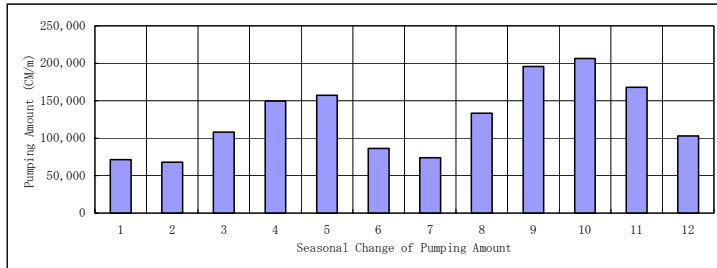
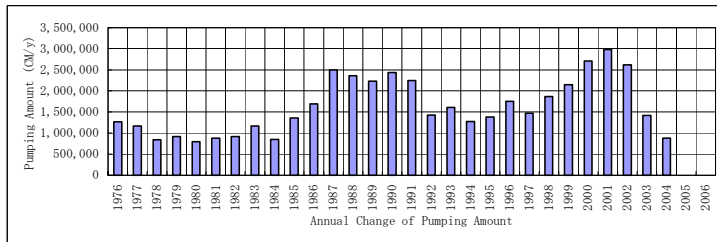
PMD_Code
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 LOC_Name_E Eocene
 GR_Governate_E

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	244	142	3	126,120	238,132	234,853	302,759	324,553	297,856	286,842	230,604	204,318	2,246,426
1977	209,068	203,624	281,409	340,090	361,706	371,794	422,137	408,928	347,148	285,765	176,007	136,041	3,543,717
1978	184,681	165,290	204,940	324,806	381,720	406,791	490,780	466,585	424,306	359,369	213,508	200,620	3,823,396
1979	258,106	271,466	406,958	503,280	509,485	440,700	450,793	457,849	443,182	452,626	328,566	224,212	4,747,223
1980	200,330	172,138	238,067	304,277	367,688	397,695	479,509	483,696	470,747	514,023	430,494	249,254	4,307,918
1981	174,901	275,376	366,438	402,792	561,470	674,642	692,815	636,552	574,253	507,603	500,978	523,196	5,891,016
1982	433,143	409,377	517,563	635,302	676,299	586,616	717,034	690,588	677,647	690,635	477,213	423,569	6,934,986
1983	439,036	392,751	501,502	700,870	942,919	1,014,699	1,139,214	1,066,309	1,028,590	1,029,206	773,561	738,488	9,767,145
1984	777,978	746,172	948,359	1,122,823	1,197,460	1,204,057	1,355,803	1,307,003	1,218,888	1,000,074	765,443	892,690	12,536,750
1985	833,423	1,136,775	1,471,743	1,284,692	1,239,821	1,103,869	1,300,653	1,189,106	1,267,328	1,326,528	971,000	820,085	13,945,023
1986	701,628	759,448	1,169,548	1,103,122	1,055,465	1,207,496	1,315,044	1,195,494	1,139,194	843,010	475,867	451,397	11,416,713
1987	489,795	538,627	866,514	1,112,541	1,363,166	1,408,110	1,492,103	1,487,692	1,215,201	930,159	681,611	518,187	12,103,706
1988	380,259	326,972	633,849	918,208	1,071,418	1,124,101	1,324,121	1,305,637	1,161,544	1,020,400	686,209	503,736	10,456,454
1989	421,535	528,241	845,480	1,122,078	1,147,438	920,366	1,128,990	1,179,565	1,043,044	919,831	831,320	799,563	10,887,451
1990	520,788	456,128	762,238	1,048,038	1,317,858	1,293,856	1,338,434	1,258,021	1,222,796	1,207,252	905,548	812,484	12,143,441
1991	678,080	570,005	807,847	1,028,086	1,029,679	838,171	935,880	985,051	1,038,701	889,109	513,211	330,474	9,644,294
1992	270,226	338,876	829,866	1,130,461	1,189,032	1,017,018	955,246	1,010,151	1,005,002	875,175	543,175	417,706	9,581,934
1993	435,146	481,425	828,168	948,305	1,067,676	1,110,624	1,081,254	1,032,688	1,108,810	1,101,035	776,715	759,256	10,731,102
1994	659,951	460,263	850,417	1,195,014	1,197,041	1,110,009	1,276,703	1,331,971	1,187,776	895,868	531,682	587,123	11,283,818
1995	645,572	678,381	1,017,128	1,186,494	1,276,194	1,252,706	1,324,306	1,127,153	1,238,993	1,214,814	767,185	726,261	12,455,187
1996	658,086	595,603	888,044	1,165,209	1,285,513	1,230,737	1,315,145	1,252,395	783,644	398,831	385,966	398,831	10,358,004
1997	398,831	375,883	642,506	1,363,008	1,634,837	1,770,749	1,743,976	1,661,692	1,649,197				11,240,679
1998			1,510,690	1,562,925	1,751,534	1,818,523	1,711,923	1,779,934	1,815,206	1,525,073	1,104,654	1,083,420	15,663,882
1999	1,147,548	1,082,533	1,373,538	1,372,332	1,795,987	1,610,438	1,498,764	1,569,071	1,538,985	1,574,186	1,132,068	888,878	16,584,328
2000	621,236	732,564	1,271,306	1,359,359	1,671,932	1,580,056	1,663,150	958,772	0	0	0	0	9,858,375
2001	0	0	0	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	384,653	389,935	620,456	753,556	849,402	829,957	885,695	844,079	770,904	661,580	473,420	422,993	9,686,119



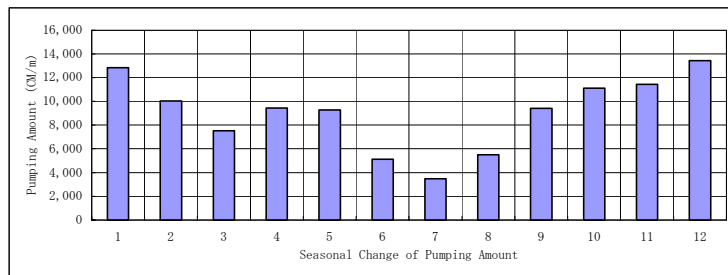
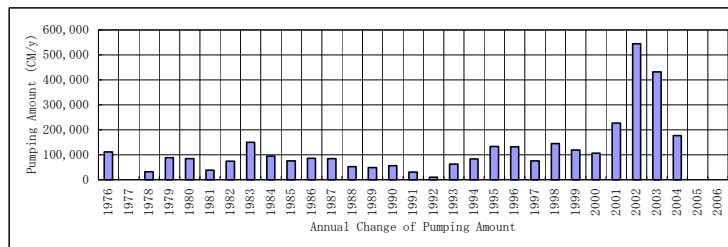
PMD_Code
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 GR_Governate_E

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	70,979	57,011	54,631	126,886	198,271	44,854	40,385	53,990	176,266	196,651	158,812	88,342	1,267,078
1977	33,826	130,922	119,110	127,651	80,704	30,557	43,063	93,287	158,143	159,543	134,357	56,592	1,167,755
1978	55,352	129,247	137,686	97,279	48,448	26,027	23,764	51,021	77,717	92,022	68,327	34,284	841,174
1979	64,109	80,866	59,609	35,100	28,076	31,847	59,246	53,876	156,657	177,936	121,233	47,658	916,213
1980	11,105	8,902	39,998	62,105	66,252	41,752	36,633	29,998	122,077	158,538	147,197	69,144	793,701
1981	23,214	28,291	92,582	80,552	59,483	31,530	20,494	49,536	78,348	170,811	145,171	99,295	879,307
1982	75,767	40,572	32,650	78,927	76,278	44,707	27,765	39,983	118,879	183,777	139,041	56,940	915,286
1983	24,486	16,936	37,386	105,647	114,933	75,267	54,033	120,645	195,414	176,402	137,934	109,380	1,168,463
1984	49,326	56,065	46,682	46,357	52,785	26,701	18,053	13,816	90,372	186,624	162,898	101,127	850,806
1985	104,778	45,142	93,914	112,999	102,924	55,720	25,935	87,818	184,182	238,718	193,077	116,234	1,361,441
1986	81,743	48,992	118,135	134,925	148,823	125,148	115,822	143,881	258,110	288,100	181,815	45,874	1,691,368
1987	47,763	92,136	152,726	323,542	254,368	150,833	159,896	241,709	326,862	332,032	282,979	135,979	2,500,825
1988	87,662	48,189	148,341	335,925	316,350	148,335	117,338	232,399	304,952	289,984	245,079	84,086	2,358,640
1989	54,763	108,860	191,204	302,165	249,163	77,614	57,386	173,302	285,923	365,188	263,076	97,558	2,226,202
1990	52,432	55,526	200,261	260,914	244,214	80,855	86,053	221,846	283,680	363,390	339,621	249,209	2,438,001
1991	181,227	102,691	163,155	246,224	248,510	104,757	45,182	217,051	320,806	287,594	188,349	142,647	2,248,193
1992	46,659	41,031	115,833	188,289	231,457	74,815	20,226	138,205	174,170	188,639	137,596	69,544	1,426,464
1993	43,525	55,217	140,956	182,809	160,798	70,900	57,466	192,103	246,675	201,985	149,063	105,596	1,607,093
1994	59,905	50,270	101,131	132,500	164,888	112,118	42,967	115,948	224,913	154,136	77,211	40,557	1,276,544
1995	53,626	49,392	94,510	117,640	144,652	71,685	62,399	117,970	239,235	214,861	127,276	83,263	1,376,509
1996	69,304	72,613	97,025	135,227	216,063	106,774	69,405	223,575	201,871	201,339	194,843	159,742	1,747,781
1997	96,318	29,104	50,741	129,604	206,076	120,643	87,966	131,452	284,397	200,952	93,232	41,148	1,471,633
1998	38,445	39,685	80,445	141,573	201,485	103,096	64,741	213,243	326,703	297,642	217,107	145,649	1,869,814
1999	57,833	88,778	152,270	150,293	168,093	91,783	87,081	142,990	188,046	326,142	437,205	253,320	2,143,834
2000	76,489	78,036	136,436	308,550	334,548	178,695	173,517	348,627	335,340	247,903	239,907	247,903	2,705,951
2001	247,903	223,912	247,903	233,759	256,490	248,217	256,490	256,490	248,217	256,490	248,217	256,490	2,980,578
2002	256,490	205,525	227,545	220,205	227,545	220,205	227,545	227,545	220,205	227,545	204,987	154,334	2,619,676
2003	86,363	83,975	125,360	117,953	146,528	138,061	136,516	121,828	123,108	129,726	125,541	83,894	1,418,853
2004	50,791	45,109	99,525	105,098	122,843	48,014	71,731	78,224	116,436	84,028	40,977	15,800	878,576
2005	10,914	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	71,390	68,161	108,315	149,700	157,131	86,500	73,842	133,302	195,732	206,410	167,811	102,954	1,625,785



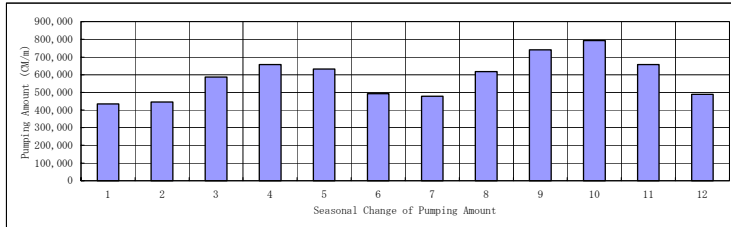
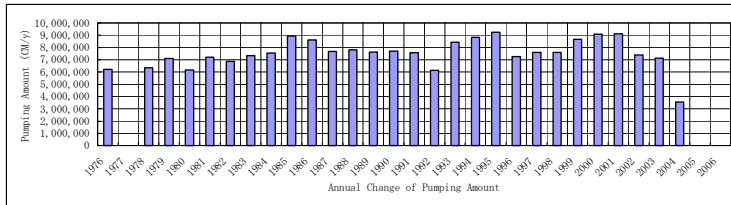
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1976	7,015	14,332	12,830	28,874	31,423	16,691	15	2	2	0	0	0	111,184
1977	0	0	0	0	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	31	169	381	862	4,988	8,129	7,427	10,032	32,019
1979	16,535	14,688	10,851	4,980	1,647	1,099	651	3,314	9,601	11,243	8,657	5,086	88,352
1980	83	77	10,432	10,430	5,462	4,524	2,525	2,111	6,018	19,713	16,946	6,502	84,823
1981	5,174	558	419	0	0	0	0	0	3,911	12,123	10,236	6,327	38,748
1982	6,329	5,720	7,353	9,954	8,305	47	46	33	3,651	12,500	11,312	9,458	74,708
1983	9,099	7,770	11,561	37,907	35,755	3,745	3,253	2,277	4,153	14,368	12,580	8,502	150,970
1984	10,533	16,366	15,666	7,783	5,566	1,030	1,475	2,480	4,285	10,830	10,022	9,408	95,444
1985	9,856	10,064	11,447	11,393	8,209	701	576	266	3,278	7,470	6,788	6,101	76,149
1986	7,378	8,761	10,565	13,095	7,900	99	1,304	3,207	6,322	13,184	10,743	4,257	86,815
1987	4,851	6,618	7,479	8,615	6,093	953	1,913	3,862	4,944	16,327	14,213	9,298	85,166
1988	8,047	3,514	7,033	14,556	10,929	850	850	0	652	2,244	2,164	2,166	53,005
1989	2,216	2,659	4,717	13,490	10,820	121	205	534	1,057	4,724	4,476	4,130	49,149
1990	4,328	4,285	4,748	4,601	4,159	134	717	3,128	4,567	9,948	9,015	6,787	56,417
1991	6,787	4,732	4,902	3,735	1,775	1,718	1,775	1,757	1,675	1,405	698	709	31,668
1992	673	741	875	810	491	417	192	751	1,711	1,637	1,056	939	10,293
1993	416	362	333	1,178	1,894	1,257	110	8,746	17,379	16,767	8,446	6,475	63,363
1994	0	3,562	9,203	9,362	11,561	10,083	2,997	6,074	16,086	8,624	3,458	2,243	83,253
1995	137	1,977	6,521	9,388	13,860	13,304	12,185	15,311	25,191	21,350	7,638	6,576	133,438
1996	2,062	2,819	11,254	13,679	17,903	11,661	6,196	11,615	15,028	15,529	15,028	9,594	132,368
1997	1,377	1,159	493	2,713	10,392	8,146	5,455	11,405	20,154	10,863	2,572	1,573	76,302
1998	679	1,673	2,505	12,092	21,237	14,844	6,490	14,785	27,019	22,202	11,424	9,957	144,907
1999	5,442	10,440	19,715	17,262	14,595	9,752	1,042	6,655	13,035	10,837	5,856	4,625	119,256
2000	3,287	4,493	6,668	5,950	5,469	3,532	11	8,447	16,884	17,446	16,884	17,446	106,517
2001	17,446	15,758	17,446	17,892	20,052	19,405	20,052	20,052	19,405	20,052	19,405	20,052	227,017
2002	20,052	18,111	20,052	19,405	20,052	19,405	20,052	20,052	19,405	20,052	110,579	237,468	544,685
2003	237,468	138,657	2,393	2,316	2,393	2,806	3,117	3,117	8,358	10,644	10,301	10,644	432,214
2004	10,644	11,058	15,519	11,363	9,555	12,643	13,942	19,718	32,745	24,477	16,229	0	177,893
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	12,836	10,031	7,515	9,446	9,275	5,133	3,469	5,502	9,403	11,119	11,424	13,431	120,219



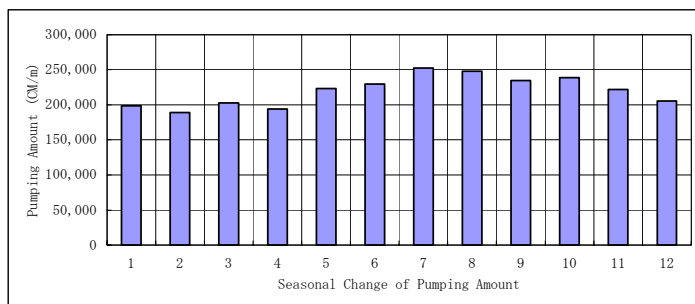
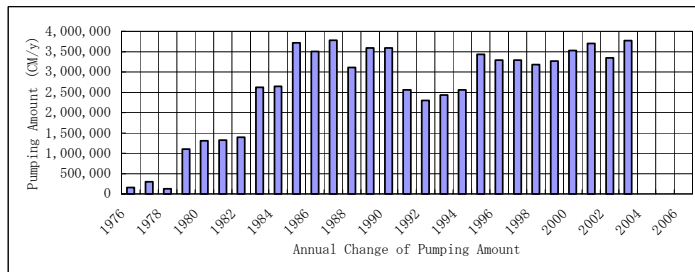
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	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	291,235	357,601	458,939	745,835	749,138	353,982	295,896	408,102	609,153	785,921	672,232	479,292	6,207,326
1977	490,110	578,105	838,441	890,193	557,491	358,230	367,356	495,151	708,644	735,637	607,780	331,152	
1978	373,495	441,437	656,555	716,031	522,559	314,597	343,908	449,800	654,777	857,396	586,059	441,601	6,358,215
1979	418,997	489,484	653,218	654,116	609,237	503,159	541,993	614,527	852,736	894,667	575,868	298,805	7,106,807
1980	180,237	196,664	411,771	467,960	591,859	545,232	467,556	467,172	736,029	973,825	715,033	418,071	6,171,409
1981	282,577	335,740	639,233	724,222	656,240	509,102	451,975	515,686	677,439	897,615	802,766	708,166	7,200,761
1982	494,132	412,570	508,041	593,558	707,661	525,223	449,371	600,737	698,148	799,392	627,216	447,749	6,863,798
1983	354,402	320,634	408,557	909,899	820,277	526,994	464,992	560,097	678,901	905,374	755,341	624,661	7,330,129
1984	558,487	544,865	608,211	514,756	539,613	455,904	445,753	539,807	714,660	979,466	852,330	787,006	7,540,858
1985	648,738	528,028	647,660	684,034	731,056	541,404	589,338	724,724	924,686	1,124,017	936,489	840,466	8,920,640
1986	758,662	668,890	876,119	826,586	774,171	625,956	610,042	720,943	805,220	885,515	644,425	413,402	8,609,931
1987	468,528	544,299	700,953	768,116	642,341	455,731	505,683	710,849	775,249	890,128	738,853	484,376	7,685,106
1988	354,609	263,954	619,882	778,268	770,494	561,740	518,003	762,899	844,489	955,346	851,966	532,632	7,814,282
1989	428,364	498,474	787,480	850,247	683,346	419,312	378,382	568,147	781,891	925,705	755,175	545,808	7,622,331
1990	433,452	377,937	635,990	710,975	616,573	459,232	487,928	718,602	809,796	969,422	814,060	671,989	7,705,956
1991	606,203	463,254	612,916	601,964	574,513	485,712	534,021	742,356	899,924	921,264	727,358	411,280	7,580,765
1992	189,588	258,765	381,292	592,006	605,929	521,766	431,891	557,251	697,607	798,272	669,488	439,760	6,143,615
1993	358,168	433,116	629,511	810,553	777,780	543,345	492,709	678,963	840,577	1,130,578	1,006,386	736,111	8,437,797
1994	584,320	545,911	695,629	795,359	798,942	660,369	664,607	812,971	1,115,409	940,970	748,713	480,220	8,843,420
1995	452,162	558,914	742,451	801,764	782,497	674,343	727,308	862,761	1,134,981	1,127,683	858,639	525,403	9,248,906
1996	355,788	390,594	499,327	638,418	672,085	573,345	565,779	736,267	793,100	776,368	735,097	525,695	7,261,863
1997	401,954	447,635	560,487	713,689	810,809	628,845	548,185	748,302	952,880	809,365	630,477	354,900	7,607,528
1998	313,151	418,286	550,605	641,763	680,124	591,245	545,246	713,578	893,371	879,280	748,819	625,894	7,601,362
1999	507,743	560,545	769,653	806,719	809,889	667,300	544,479	798,866	910,096	897,021	820,489	580,258	8,673,058
2000	472,793	450,505	550,011	650,843	686,009	590,431	624,801	1,366,768	1,322,757	796,527	770,833	796,527	9,078,805
2001	796,527	719,445	796,527	738,041	770,653	745,795	770,653	770,653	745,795	765,245	733,567	758,017	9,110,918
2002	722,265	610,991	676,373	654,553	676,373	654,553	676,373	676,373	654,553	551,301	447,599	390,467	7,391,774
2003	768,683	1,070,951	897,801	767,450	645,004	525,134	535,582	540,303	358,440	350,465	336,957	341,141	7,137,911
2004	339,494	325,258	361,125	347,711	342,498	239,230	232,846	292,825	375,380	302,152	239,943	162,752	3,561,214
2005	81,313	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
Ave.	435,038	445,576	586,283	657,924	632,425	492,168	477,828	617,919	740,861	794,384	658,386	488,826	7,529,160



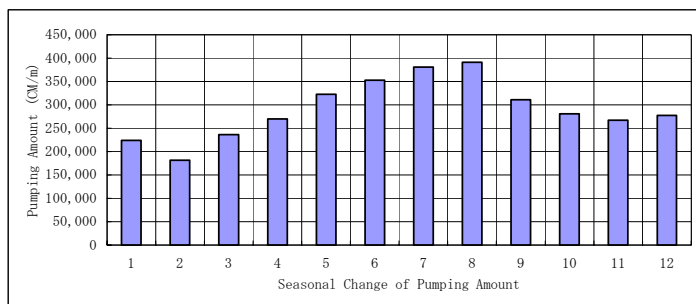
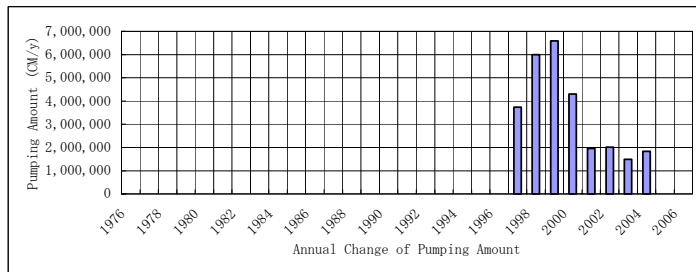
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1976	11,555			12,305	23,706	20,996	22,537	23,821	23,764	12,180		8,743	159,607
1977	8,197			21,264	47,063	50,028	37,624	24,067	35,964	43,875	23,301	4,440	295,823
1978			6,617	13,073	13,920	13,410	13,314	13,023	13,034	13,342	13,048	16,652	129,433
1979	19,650	24,441	74,354	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,103,229
1980	111,012	103,850	111,012	107,431	111,012	107,431	111,012	111,012	107,431	111,012	107,431	111,012	1,310,658
1981	111,012	100,269	111,012	107,854	111,925	108,570	112,715	113,132	109,372	112,914	109,917	114,203	1,322,895
1982	114,334	102,550	113,671	110,796	116,784	125,684	128,515	117,218	113,437	117,218	113,437	117,218	1,390,862
1983	117,218	105,874	117,218	113,437	117,218	113,437	262,997	344,830	338,066	336,785	325,825	334,325	2,627,230
1984	287,776	221,727	127,967	107,431	135,693	181,758	332,415	300,656	233,658	270,110	231,996	215,064	2,646,251
1985	263,879	242,678	269,481	300,139	349,277	343,641	347,777	334,282	284,389	316,602	331,166	335,267	3,718,578
1986	286,006	261,431	331,866	320,746	322,803	308,484	348,786	326,443	264,437	255,943	244,085	233,499	3,504,529
1987	277,448	301,696	342,455	355,524	358,704	326,470	348,518	343,120	312,635	311,175	270,683	232,582	3,781,010
1988	209,537	194,624	230,177	250,875	225,254	211,571	243,524	261,019	316,433	353,180	327,209	286,065	3,109,468
1989	267,732	232,952	218,211	289,208	335,160	337,410	342,459	355,060	349,016	321,979	284,369	258,795	3,592,351
1990	236,636	219,106	245,852	254,207	299,423	330,434	345,448	348,001	350,960	352,518	304,273	309,691	3,596,549
1991	273,475	175,865	173,745	125,540	223,044	266,191	234,034	234,034	226,732	234,513	205,879	187,860	2,560,912
1992	182,981	164,856	157,758	135,915	172,737	173,175	229,745	239,514	234,395	243,028	190,774	174,186	2,299,064
1993	160,317	142,394	171,543	168,001	208,484	208,251	241,069	244,902	238,278	246,484	206,324	196,560	2,432,607
1994	154,097	137,906	152,682	147,757	226,373	239,871	247,385	247,314	272,681	277,065	229,598	227,299	2,560,028
1995	193,725	171,728	213,495	252,085	321,000	319,321	351,473	377,249	337,550	343,113	281,339	274,093	3,436,171
1996	206,707	184,819	198,029	189,225	280,669	311,030	338,370	343,671	319,195	323,906	299,608	301,310	3,296,539
1997	263,145	223,577	202,683	187,799	274,815	304,490	320,060	321,945	309,485	317,351	285,436	285,350	3,296,136
1998	243,311	188,495	207,118	199,907	275,637	298,574	319,203	325,945	306,500	313,182	258,260	247,020	3,183,152
1999	237,062	209,173	293,168	308,092	279,319	252,317	276,219	287,407	303,140	333,003	258,161	228,418	3,265,479
2000	220,760	197,820	260,768	291,650	320,377	332,376	343,587	343,659	310,288	305,277	295,430	305,277	3,527,269
2001	304,958	271,257	300,321	312,046	322,447	325,502	336,277	334,011	322,228	299,070	289,470	283,082	3,700,669
2002	233,632	212,266	269,609	280,455	295,869	296,039	311,241	319,685	309,373	294,246	283,934	240,486	3,346,835
2003	451,916	408,183	451,916	437,338	451,916	437,338	451,916	233,265	111,067	114,769	111,067	114,769	3,775,460
2004	114,769	107,364	114,769	111,067	135,572	200,222	204,818	201,528					
2005													
2006													
Ave.	198,673	188,727	202,500	193,745	223,007	229,360	252,209	247,615	234,319	238,745	221,832	205,510	2,606,028



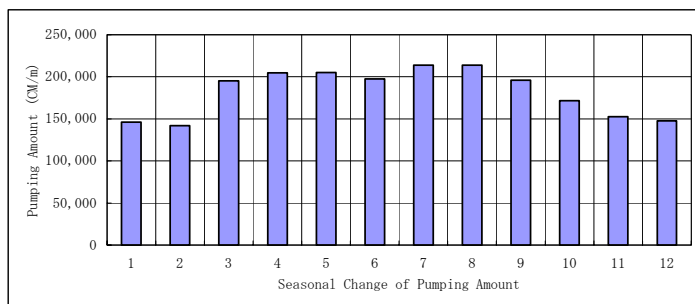
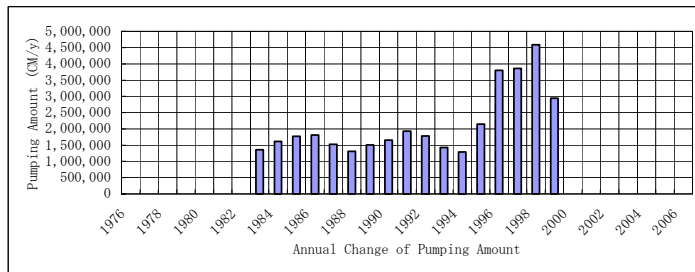
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1977													
1978													
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1996													
1997	8, 118	25, 256	220, 510	356, 353	368, 232	356, 353	483, 370	523, 417	444, 493	248, 672	280, 278	430, 370	3, 745, 422
1998	400, 302	312, 185	347, 323	337, 863	486, 202	606, 535	635, 748	657, 495	597, 073	570, 885	536, 482	508, 614	5, 996, 707
1999	486, 943	425, 149	532, 895	572, 132	596, 452	583, 698	603, 154	603, 154	581, 619	593, 264	538, 695	478, 517	6, 595, 672
2000	403, 533	249, 962	274, 609	396, 143	474, 173	581, 100	609, 458	625, 800	178, 625	167, 807	152, 687	181, 961	4, 295, 858
2001	177, 661	149, 729	167, 593	165, 393	172, 493	169, 721	176, 983	179, 900	168, 999	164, 097	146, 607	126, 287	1, 965, 463
2002	116, 920	110, 192	151, 477	157, 588	163, 233	184, 235	191, 312	191, 312	185, 141	191, 312	185, 141	191, 312	2, 019, 175
2003	57, 178	51, 644	57, 178	39, 692	176, 140	170, 458	176, 140	176, 140	170, 458	147, 215	134, 302	138, 778	1, 495, 323
2004	138, 778	129, 825	138, 778	134, 302	144, 020	165, 750	171, 275	170, 293	159, 857	165, 186	159, 857	161, 224	1, 839, 145
2005													
2006													
Ave.	223, 679	181, 743	236, 295	269, 933	322, 618	352, 231	380, 930	390, 939	310, 783	281, 055	266, 756	277, 133	3, 494, 096



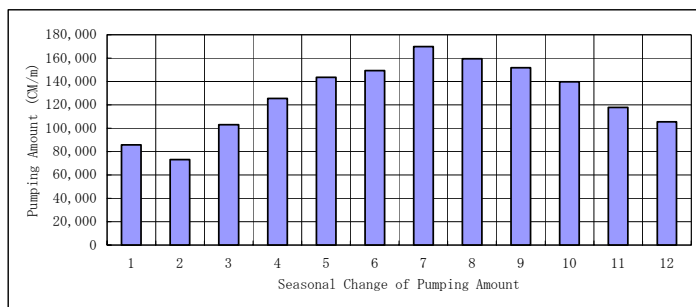
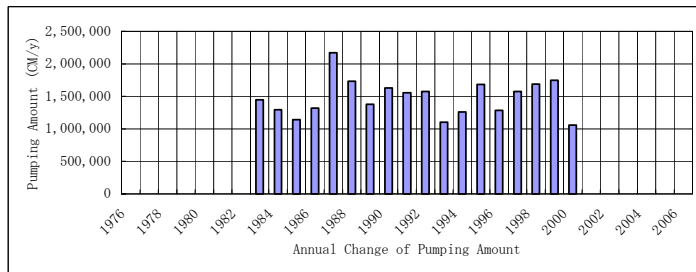
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1977													
1978													
1979													
1980													
1981													
1982													
1983		92,690	159,993	160,497	171,310	154,690	194,510	162,513	112,918	68,588	35,519	49,905	1,363,133
1984	66,264	87,166	105,221	94,131	140,175	170,390	195,616	194,258	188,976	169,750	91,800	106,948	1,610,695
1985	120,568	68,387	93,703	137,044	161,331	189,969	207,660	193,990	184,000	126,406	109,694	176,887	1,769,639
1986	195,377	192,621	187,966	148,248	160,694	145,456	150,592	161,371	150,737	131,911	102,689	90,050	1,817,712
1987	82,823	101,036	166,387	172,505	118,098	103,852	178,658	200,984	108,208	73,727	101,573	117,621	1,525,472
1988	113,332	93,815	109,863	127,069	100,492	45,889	45,738	88,867	147,915	172,215	155,435	107,084	1,307,714
1989	81,235	111,941	145,601	163,189	170,192	135,758	118,974	100,132	97,794	105,239	131,211	147,489	1,508,755
1990	118,871	124,276	180,627	166,687	154,494	116,256	115,311	144,794	148,745	148,032	114,818	119,644	1,652,555
1991	149,835	142,302	157,724	146,295	162,231	186,969	175,531	149,519	164,400	181,955	154,745	160,052	1,931,558
1992	136,532	98,491	134,348	151,277	137,174	115,026	131,313	152,226	181,211	201,202	175,548	170,710	1,785,058
1993	172,645	157,609	212,068	219,468	187,790	163,710	119,484	76,500	48,164	23,040	22,297	23,040	1,425,815
1994	23,040	20,810	23,040	22,297	23,040	126,198	219,153	187,094	213,103	185,561	126,891	117,871	1,288,098
1995	88,939	121,276	211,222	233,660	207,985	213,965	243,109	216,529	170,415	148,290	143,506	148,290	2,147,186
1996	148,290	174,133	220,261	381,832	398,804	413,667	426,066	413,102	379,249	307,046	297,142	242,878	3,802,470
1997	256,568	296,033	327,751	317,179	327,751	317,179	332,257	370,540	430,309	344,000	328,618	211,161	3,859,346
1998	212,843	206,422	523,305	437,838	451,683	415,364	429,011	426,123	407,924	357,098	346,110	373,608	4,587,329
1999	369,967	323,108	354,288	400,969	412,239	338,115	350,842	394,526					2,944,054
2000													
2001													
2002													
2003													0
2004													
2005													
2006													
Ave.	146,071	141,889	194,904	204,717	205,028	197,203	213,754	213,710	195,879	171,504	152,350	147,702	2,018,144



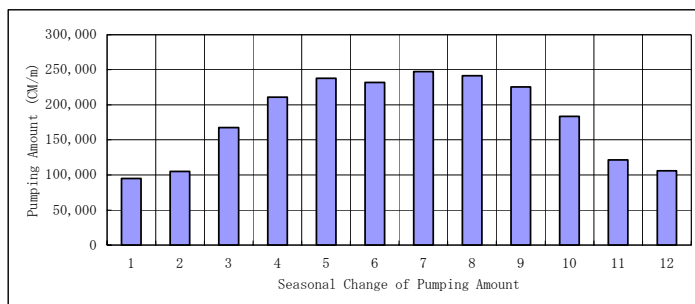
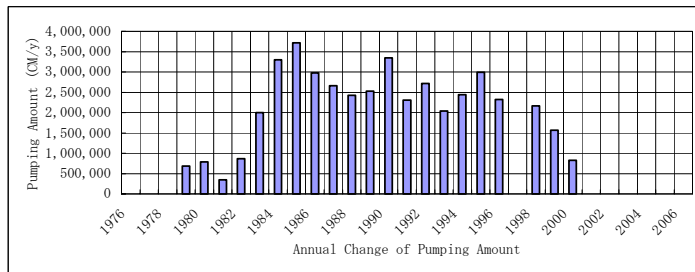
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1977													
1978													
1979													
1980													
1981													
1982													
1983				83,627	152,877	158,023	220,587	233,016	199,347	148,708	118,242	135,703	1,450,130
1984	135,868	122,974	93,645	72,410	77,116	119,884	166,961	145,694	131,545	101,535	62,815	62,821	1,293,268
1985	56,226	114,685	127,069	28,248	16,848	71,602	158,285	140,510	115,955	121,316	100,684	89,568	1,140,996
1986	39,006	15,379	55,459	64,687	66,694	121,606	177,716	158,094	158,840	147,521	136,979	179,702	1,321,683
1987	181,345	166,264	198,639	188,000	201,923	200,877	192,071	201,139	184,940	179,634	145,566	129,031	2,169,429
1988	72,961	44,472	149,512	188,124	174,234	164,016	193,848	199,194	185,958	163,898	126,934	71,674	1,734,825
1989	19,358	24,121	67,859	147,555	175,516	144,434	147,305	151,677	134,318	119,356	125,694	123,984	1,381,177
1990	69,410	22,256	14,186	95,264	185,381	187,319	202,774	193,610	191,066	195,076	136,224	136,608	1,629,174
1991	128,571	109,464	168,165	180,792	148,776	122,324	151,582	159,426	162,242	126,323	62,927	36,542	1,557,134
1992	25,754	24,092	115,842	183,869	181,247	163,153	170,234	175,142	159,874	151,961	127,239	98,213	1,576,620
1993	41,548	23,237	43,873	83,529	141,371	155,579	151,644	65,859	98	68,798	145,802	181,995	1,103,333
1994	107,774	30,869	43,610	90,602	143,823	127,177	141,629	141,839	135,532	133,274	69,226	97,652	1,263,007
1995	141,735	130,570	150,233	153,460	162,176	155,374	172,465	150,132	145,903	147,719	96,981	77,739	1,684,487
1996	62,148	62,516	112,406	158,890	187,935	182,715	189,260	183,394	97,551	15,406	14,909	15,406	1,282,536
1997	15,406	13,915	29,372	119,651	132,783	188,231	185,210	98,452	130,033	278,028	269,060	116,019	1,576,160
1998	116,019	104,791	116,019	112,276	116,019	112,276	116,019	153,563	290,852	168,200	161,295	122,347	1,689,676
1999	126,572	149,944	166,009	160,654	166,009	160,654	166,009	166,009	156,805	106,350	103,350	119,692	1,748,057
2000	116,082	85,801	99,570	147,642	152,615	149,198	154,169	154,080					1,059,157
2001													
2002													
2003													
2004													
2005													
2006													
Ave.	85,634	73,256	103,028	125,516	143,519	149,136	169,876	159,491	151,815	139,594	117,878	105,570	1,481,158



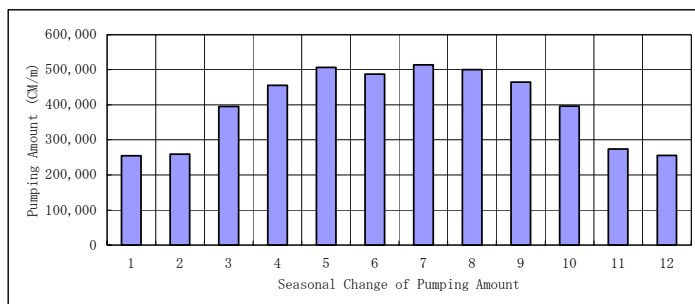
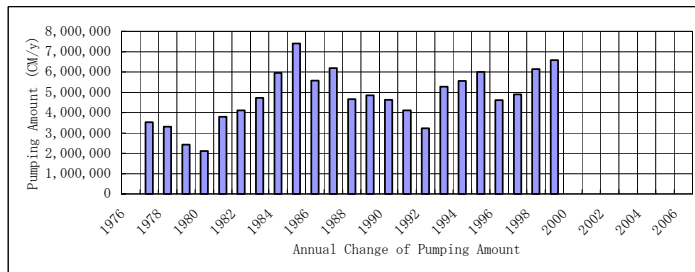
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1976													
1977													
1978										6,526	7,508	17,234	
1979	30,000	34,016	54,913	78,537	95,118	70,382	30,118	54,784	90,698	89,824	48,185	8,182	684,757
1980	4,866	1,643	14,992	61,008	100,860	102,590	105,600	97,397	99,053	100,653	70,397	28,245	787,304
1981	3,316	9,453	18,850	26,585	24,366	13,529	13,980	13,980	28,132	95,982	83,527		345,229
1982	14,680	13,260	14,680	98,853	104,052	23,066	46,526	108,523	175,834	157,598	65,702	43,656	866,430
1983	52,161	46,319	97,846	129,968	154,148	175,608	223,504	227,681	209,855	275,945	239,355	166,187	1,998,577
1984	149,248	111,337	197,879	293,198	312,096	341,004	398,682	373,206	311,961	273,646	238,304	299,715	3,300,276
1985	287,303	256,004	335,964	375,315	360,655	337,105	331,858	243,958	318,434	331,637	263,463	273,654	3,715,350
1986	245,729	272,174	378,348	323,395	308,350	345,150	325,143	280,139	297,118	174,095	18,405	8,476	2,976,522
1987	28,760	65,124	149,358	259,933	362,191	360,359	361,443	367,146	298,361	186,616	119,434	105,440	2,664,165
1988	85,390	75,099	159,785	240,785	256,169	286,781	374,674	334,038	257,887	185,110	90,640	79,441	2,425,799
1989	109,016	153,065	220,009	216,069	223,024	174,926	263,932	339,994	252,374	205,248	189,852	183,868	2,531,377
1990	111,829	155,293	288,862	314,499	353,802	335,448	342,123	328,191	309,937	303,015	279,085	225,646	3,347,730
1991	179,954	190,334	216,050	242,265	258,445	194,255	183,339	165,763	170,828	227,973	172,597	105,655	2,307,458
1992	125,213	158,550	267,305	323,777	363,068	323,932	269,942	269,135	268,472	215,954	93,946	36,960	2,716,254
1993	27,584	26,342	131,229	179,386	209,699	260,051	254,051	226,403	283,895	254,305	98,995	91,414	2,043,354
1994	113,548	95,744	211,546	297,097	270,774	239,226	292,710	321,452	274,339	165,952	67,548	88,207	2,438,143
1995	106,284	150,320	243,332	286,808	335,530	333,820	334,074	270,965	310,712	293,653	163,297	163,971	2,992,766
1996	189,781	182,259	201,809	260,131	297,069	271,231	294,946	282,168	162,576	62,290	60,281	62,290	2,326,831
1997	62,290	56,262	87,202	209,756	223,291	307,905	318,169	313,072	296,984				
1998	9,766	110,764	167,779	191,589	250,132	241,883	282,306	277,496	249,147	223,420	78,987	84,110	2,167,379
1999	120,201	108,569	120,201	116,323	194,610	197,760	199,226	171,107	87,350	90,262	87,350	70,363	1,563,322
2000	28,579	41,663	105,710	116,865	170,210	168,328	198,183						829,538
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Ave.	94,795	105,163	167,439	211,006	237,621	232,015	247,479	241,267	225,683	183,422	121,396	106,011	2,144,217



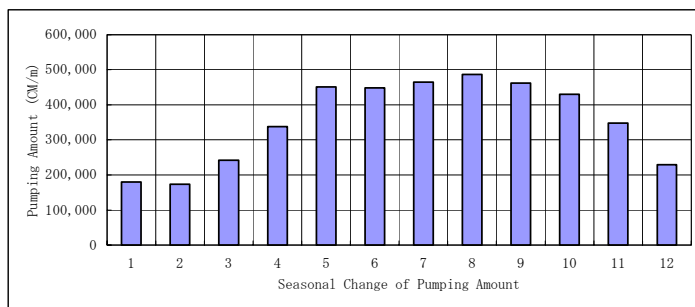
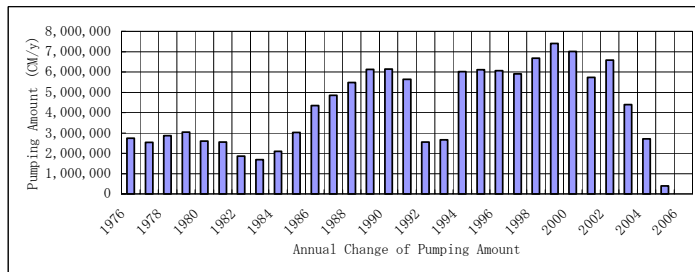
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1976				125,707	236,302	232,135	299,884	321,583	293,883	286,051	230,156	203,885	
1977	209,056	203,548	280,809	339,001	360,177	369,473	419,483	405,381	344,036	284,000	175,700	135,961	3,526,625
1978	184,601	165,217	204,860	324,411	378,364	357,836	407,877	416,439	337,084	247,978	153,560	134,379	3,312,606
1979	156,727	151,983	228,593	265,329	251,265	224,888	267,463	260,761	212,673	195,920	122,980	88,612	2,427,194
1980	121,532	130,314	152,613	163,279	189,825	197,025	212,866	212,687	197,397	216,700	190,050	132,986	2,117,274
1981	123,790	161,285	204,746	246,289	380,142	487,058	507,119	456,281	381,900	297,039	256,111	292,460	3,794,220
1982	289,652	283,746	357,183	374,960	374,428	365,602	458,507	391,287	333,845	337,955	261,276	277,173	4,105,614
1983	292,042	284,364	355,869	409,503	498,146	512,099	523,614	435,298	422,013	416,378	272,972	303,173	4,725,471
1984	368,661	387,036	503,205	562,725	571,054	550,096	615,996	609,670	593,082	450,496	327,404	409,511	5,948,936
1985	382,264	629,772	803,155	655,048	695,919	595,581	673,600	660,103	666,547	727,037	525,913	389,646	7,404,585
1986	354,819	389,379	578,757	539,899	518,765	566,285	629,595	590,143	522,513	381,015	255,585	255,942	5,582,697
1987	273,997	302,097	511,930	610,535	674,950	685,800	742,615	780,440	646,547	463,850	293,843	200,495	6,187,099
1988	179,712	629,772	292,573	419,853	482,398	476,252	538,442	545,245	521,014	486,549	319,401	234,018	4,663,030
1989	201,429	233,566	354,241	502,445	531,737	453,763	557,630	539,064	463,055	372,300	321,900	325,410	4,856,540
1990	236,097	170,110	288,831	455,202	536,089	510,661	517,739	506,762	482,849	403,966	263,084	268,452	4,639,842
1991	217,361	165,606	304,477	424,005	453,070	408,580	461,486	548,797	566,118	353,248	131,152	82,757	4,116,657
1992	69,210	93,537	296,568	451,481	432,157	305,093	308,440	325,258	314,602	282,401	184,599	160,643	3,223,989
1993	221,330	294,645	447,909	488,672	531,540	494,410	488,736	531,622	561,042	505,016	350,184	364,103	5,279,209
1994	334,032	252,387	424,131	578,549	593,355	572,145	637,855	639,935	571,210	420,951	233,549	297,903	5,556,002
1995	352,834	317,490	477,010	604,661	652,081	624,819	642,638	538,601	575,012	545,680	343,069	323,256	5,997,151
1996	266,615	218,332	361,570	515,830	600,774	586,676	607,692	561,249	348,373	184,271	178,327	184,271	4,613,980
1997	184,271	171,761	279,177	540,156	560,547	575,953	595,151	592,728	570,759	468,409	367,259		4,906,171
1998			782,366	763,252	775,014	740,076	611,561	603,017	549,113	533,783	380,946	404,679	6,143,807
1999	523,826	480,674	557,226	552,632	712,762	634,565	444,010	519,806	679,128	651,429	427,446	400,863	6,584,367
2000	312,728	318,468	442,188	473,602	671,048	650,146	675,671						
2001													
2002													
2003													
2004													
2005													
2006													
Ave.	254,634	259,691	395,416	455,481	506,476	487,081	513,827	499,673	464,741	396,351	273,603	255,243	4,770,133



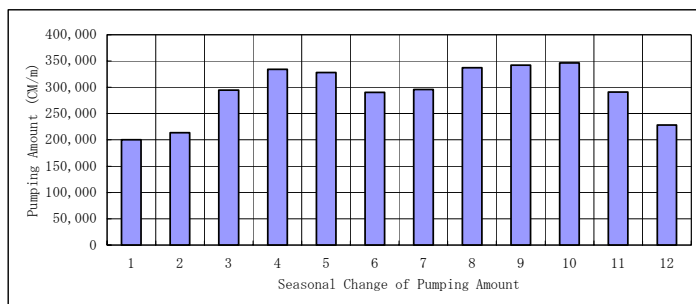
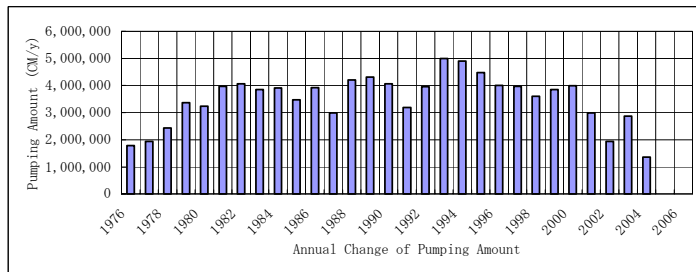
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1976	65,406	31,313	39,820	117,516	310,564	334,967	347,035	386,428	398,510	340,876	251,108	120,037	2,743,580
1977	30,882	26,590	45,747	96,595	288,506	339,484	365,221	399,367	354,900	271,150	231,295	79,362	2,529,099
1978	54,217	59,148	93,145	207,146	313,601	306,676	351,583	398,046	371,901	342,602	239,735	138,467	2,876,267
1979	120,939	175,993	243,353	287,612	352,974	371,963	350,972	358,584	280,156	261,155	192,052	44,879	3,040,632
1980	24,425	21,087	36,124	76,946	360,627	364,071	355,569	365,377	312,234	306,076	246,394	135,368	2,604,298
1981	40,860	12,223	160,862	229,860	313,524	357,070	374,880	423,328	252,763	184,344	162,341	46,839	2,558,894
1982	46,043	47,643	61,772	172,928	210,636	241,691	250,449	269,943	252,360	153,969	107,401	47,235	1,862,070
1983	7,966	6,580	59,971	110,160	190,615	216,197	224,077	248,760	253,352	182,015	115,417	78,779	1,693,889
1984	35,096	44,001	102,531	144,869	209,429	253,323	268,838	269,754	266,313	224,953	173,318	113,441	2,105,866
1985	75,978	62,871	123,707	224,009	306,426	282,807	265,824	389,939	388,813	368,867	282,357	250,424	3,022,022
1986	222,094	238,078	301,275	397,833	479,282	447,855	469,288	503,056	460,597	375,222	321,489	129,676	4,345,745
1987	104,207	76,976	96,442	356,383	533,384	547,981	593,252	600,585	598,285	580,106	503,689	261,064	4,852,354
1988	122,541	114,705	155,255	401,906	651,880	678,764	696,960	691,161	651,431	579,299	441,958	301,616	5,487,476
1989	241,942	265,283	341,335	610,074	730,234	647,350	673,066	690,053	612,386	554,977	461,111	297,676	6,125,487
1990	282,501	254,454	328,131	555,511	650,204	590,286	596,479	680,193	657,805	623,864	521,355	395,801	6,136,584
1991	375,067	300,927	360,506	483,548	597,951	550,137	591,168	648,266	635,097	569,587	377,034	160,982	5,650,270
1992	95,909	58,181	84,097	149,547	301,349	346,879	333,839	312,397	300,716	311,694	180,644	73,650	2,548,902
1993	57,516	83,904	179,832	230,369	278,327	283,202	293,773	290,923	278,725	293,678	230,720	158,193	2,659,162
1994	155,727	294,879	348,484	512,466	696,940	653,007	665,468	694,710	705,856	614,093	409,117	263,581	6,014,328
1995	225,422	221,756	378,716	444,288	580,779	654,798	692,539	677,969	664,326	666,140	541,765	357,163	6,105,661
1996	257,338	286,103	306,218	387,212	613,170	687,828	706,830	693,010	612,260	562,088	518,667	428,895	6,059,619
1997	324,761	190,167	256,740	343,004	549,244	670,480	684,594	718,484	728,872	714,361	485,822	243,475	5,910,004
1998	219,434	232,430	329,305	421,395	567,676	688,659	749,238	809,376	782,455	748,409	606,945	522,569	6,677,891
1999	506,718	445,758	561,858	647,479	721,904	611,720	653,992	737,400	705,898	693,391	604,240	510,563	7,400,921
2000	449,593	449,089	574,877	704,356	806,661	772,923	738,707	709,696	522,221	449,708	432,299	403,221	7,013,351
2001	411,180	375,275	422,920	525,432	558,523	474,803	519,112	520,062	492,540	508,572	456,324	471,470	5,736,213
2002	385,668	344,154	387,968	377,608	509,624	489,410	494,318	494,318	735,174	892,360	863,574	616,165	6,590,341
2003	401,436	362,587	592,237	613,038	534,698	275,122	330,210	330,210	278,197	250,115	242,046	185,582	4,395,478
2004	206,526	229,495	245,322	257,107	282,225	260,209	255,463	253,074	253,627	245,727	213,153	18,025	2,719,953
2005	14,290	25,972	35,185	36,596	39,049	38,908	39,722	38,958	36,021	33,170	31,637	31,119	400,627
2006	31,259	28,543											
Ave.	180,417	173,102	241,791	337,426	451,334	447,952	464,416	486,781	461,460	430,086	348,167	229,511	4,262,233



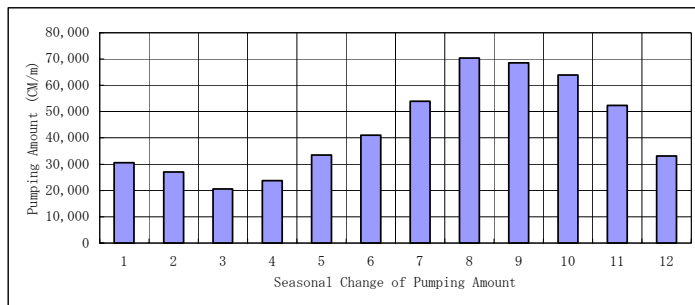
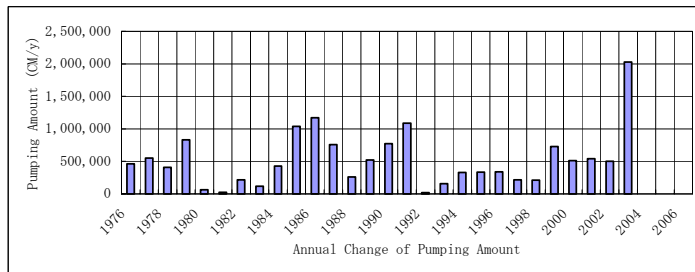
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1976	102,704	109,904	133,450	225,314	225,238	139,819	106,877	118,379	157,681	196,059	146,860	127,958	1,790,243
1977	97,925	122,111	234,723	260,282	188,692	124,686	110,833	113,012	170,373	213,211	195,248	107,261	1,938,357
1978	132,716	142,325	215,131	245,125	205,288	170,262	202,630	170,226	254,723	319,796	210,796	168,388	2,437,406
1979	188,735	225,099	309,731	346,098	328,066	281,295	293,654	298,196	331,447	327,137	254,022	184,746	3,368,226
1980	156,878	104,244	184,985	204,883	226,044	239,182	300,125	312,531	443,177	474,512	350,710	238,354	3,235,625
1981	121,458	212,192	369,715	383,285	400,050	398,569	322,638	329,967	367,532	379,346	343,943	338,199	3,966,894
1982	242,294	227,272	294,396	345,146	470,277	433,579	369,826	363,698	368,942	390,101	310,275	249,065	4,064,871
1983	198,643	194,023	214,440	405,322	361,953	367,862	315,217	324,767	392,517	388,131	345,984	341,461	3,850,320
1984	288,595	274,001	333,279	346,165	351,321	319,778	308,473	317,887	381,475	376,573	323,986	292,283	3,913,816
1985	202,384	204,613	255,710	268,881	264,695	235,111	310,649	346,609	407,320	396,142	293,325	286,591	3,472,030
1986	254,252	273,213	420,634	387,331	362,104	369,114	358,142	358,164	390,335	366,700	217,339	172,830	3,930,158
1987	177,122	169,760	246,164	280,497	301,317	298,950	290,948	253,604	264,219	251,264	235,221	218,773	2,987,839
1988	114,358	110,706	265,226	270,863	401,280	451,891	450,709	470,853	445,295	453,977	413,732	355,031	4,203,921
1989	239,766	263,596	494,936	460,860	370,599	337,547	284,649	278,134	411,641	431,294	368,117	368,098	4,309,237
1990	269,506	251,059	404,880	382,133	368,121	357,556	344,022	333,216	376,866	418,711	299,055	265,314	4,070,439
1991	219,602	193,559	308,243	344,092	332,865	224,855	241,633	279,037	287,990	339,798	294,238	130,522	3,196,434
1992	111,820	135,200	250,264	387,101	390,312	361,626	381,444	439,452	431,850	463,309	368,537	231,828	3,952,743
1993	272,756	295,279	369,684	510,061	490,760	385,765	374,984	375,914	424,549	602,162	512,969	378,809	4,993,692
1994	383,907	321,322	430,800	515,213	491,891	369,361	413,262	473,221	452,432	428,012	394,006	226,114	4,899,541
1995	212,665	308,241	390,872	409,615	400,384	327,742	382,076	453,610	472,979	482,722	396,330	247,234	4,484,470
1996	230,687	253,494	331,515	412,838	377,407	384,414	436,968	425,211	365,070	300,474	279,282	212,255	4,009,615
1997	231,381	277,802	328,502	394,654	397,247	354,318	377,705	430,183	400,533	338,711	309,158	134,622	3,974,816
1998	159,758	231,585	272,004	302,587	304,954	268,489	279,234	325,120	457,058	352,265	334,986	314,895	3,602,935
1999	313,635	263,392	321,331	351,326	350,474	209,394	232,602	373,958	374,318	453,105	416,333	187,509	3,847,377
2000	180,318	135,656	183,155	303,539	314,995	283,660	329,367	#####	436,966	257,769	249,454	257,769	3,991,578
2001	257,769	232,823	257,769	249,454	257,769	249,454	257,769	257,769	249,454	248,257	229,069	236,704	2,984,060
2002	207,385	146,967	162,712	157,464	162,712	157,464	162,712	162,712	157,464	160,384	149,688	154,679	1,942,343
2003	236,642	386,523	427,934	414,130	280,707	194,599	201,085	201,085	134,753	135,038	129,210	130,888	2,872,594
2004	130,888	122,442	130,888	126,667	124,389	120,807	125,634	137,259	107,963	99,255	63,336	65,446	1,354,974
2005	65,446												
2006													
Ave.	200,067	213,393	294,589	334,170	327,652	290,247	295,375	337,335	341,963	346,352	290,869	228,401	3,505,054



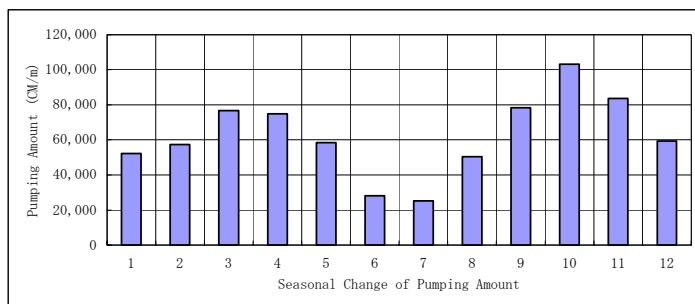
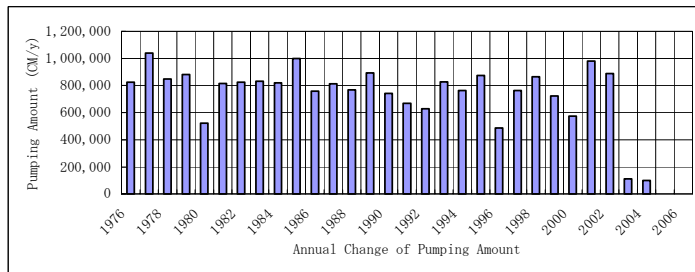
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1976	5,170	4,859	2,246	13,369	27,742	21,531	24,647	37,288	54,393	88,830	123,127	58,867	462,069
1977	28,340	16,882	9,735	6,793	13,510	27,472	43,443	65,268	91,764	105,640	102,112	41,562	552,521
1978	7,230	6,811	9,589	9,115	10,251	14,744	29,575	49,083	64,497	82,297	71,260	57,076	411,528
1979	14,962	9,439	33,136	70,647	112,654	101,148	102,976	95,819	104,892	103,353	58,703	27,235	834,964
1980	153	228	594	574	247	221	2,078	2,276	7,089	21,644	19,049	9,882	64,035
1981	8,053	1,615	3,039	5,483	3,442	351	235	9	136	404	447	647	23,861
1982	904	1,130	1,398	1,699	4,292	10,154	17,799	48,246	43,955	39,320	32,226	16,035	217,158
1983	9,396	184	1,776	12,030	12,418	11,994	17,872	26,547	21,758	2,166	1,650	435	118,226
1984	374	207	3,724	15,223	18,985	20,325	32,959	58,069	64,228	93,179	75,387	46,901	429,561
1985	37,788	10,463	14,167	16,377	37,172	77,124	105,015	151,438	154,001	167,825	147,398	119,650	1,038,418
1986	90,630	45,565	59,026	99,041	120,453	131,228	146,032	163,107	139,216	103,844	73,864	605	1,172,611
1987	634	733	1,971	12,385	24,771	45,038	84,655	170,096	157,593	114,997	95,627	47,742	756,242
1988	36,011	1,007	5,333	13,895	15,556	18,197	19,620	36,738	35,483	36,288	32,147	9,014	259,289
1989	8,413	2,534	4,938	13,375	18,395	34,121	44,949	84,059	84,533	106,369	88,511	33,452	523,649
1990	21,957	957	2,945	6,684	13,891	51,658	69,151	142,140	121,555	138,261	123,190	80,558	772,947
1991	80,558	9,500	5,130	22,765	67,470	77,729	169,469	178,330	183,854	155,914	80,101	58,780	1,089,600
1992	139	365	544	577	930	1,063	1,651	3,360	5,872	4,885	803	1,368	21,557
1993	2,915	3,711	8,486	5,952	4,359	7,375	13,231	27,870	38,639	34,771	7,703	5,655	160,667
1994	21	282	654	3,169	16,727	22,336	54,854	67,509	103,000	45,586	11,730	7,044	332,912
1995	16	340	1,026	3,497	6,993	13,673	63,304	63,304	61,263	55,927	36,670	30,007	336,020
1996	6,813	5,654	1,222	3,328	5,939	19,202	34,509	49,933	57,781	59,706	57,781	40,278	342,146
1997	16,688	11,122	1,379	5,042	14,148	17,623	23,522	30,369	38,565	29,770	21,765	9,241	219,234
1998	2,363	3,581	4,724	7,166	9,450	15,100	22,636	30,241	36,719	32,792	24,835	23,605	213,212
1999	19,864	17,072	17,091	47,208	80,470	122,888	93,185	83,569	72,147	71,130	63,916	41,115	729,655
2000	23,107	11,678	2,569	25,336	47,330	44,569	44,140	55,126	63,747	65,871	63,747	65,871	513,091
2001	65,871	59,497	65,871	40,183	39,667	38,388	39,667	39,667	38,388	39,667	38,388	39,667	544,921
2002	39,667	35,828	39,667	38,388	39,667	38,388	39,667	39,667	38,388	44,194	53,476	55,259	502,256
2003	359,359	522,955	274,978	164,813	170,264	164,604	170,090	170,090	32,922	2	2	2	2,030,081
2004	2	1								6,929	10,940		
2005													
2006													
Ave.	30,600	27,041	20,606	23,718	33,471	41,009	53,962	70,329	68,442	63,847	52,295	33,127	524,015



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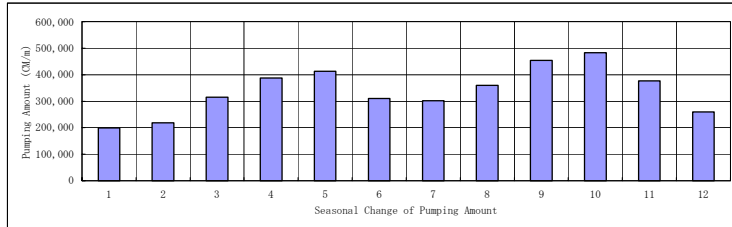
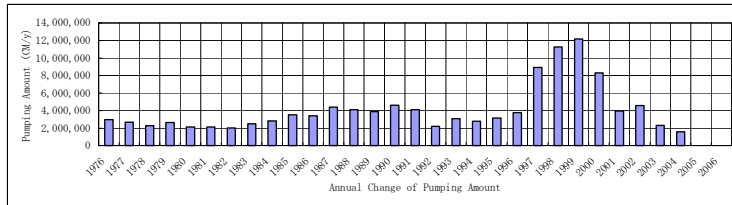
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1976	78,190	90,060	102,361	138,000	92,676	18,758	19,002	21,537	53,271	78,491	72,947	59,317	824,610
1977	123,743	131,442	159,673	166,293	70,908	21,069	31,927	73,494	86,379	83,812	63,291	28,733	1,040,764
1978	37,809	62,455	114,856	115,338	50,317	10,934	20,693	52,727	95,325	145,912	85,745	56,811	848,922
1979	67,980	76,435	97,442	64,459	37,741	31,355	33,082	62,724	115,304	151,869	92,990	50,465	881,846
1980	12,061	11,798	37,540	57,040	35,884	31,421	23,872	22,219	42,675	114,100	99,477	34,290	522,377
1981	36,168	39,746	50,318	64,185	48,599	20,033	21,328	24,978	64,761	163,552	151,089	131,180	815,937
1982	115,769	82,593	85,684	66,106	53,310	10,216	18,153	56,699	69,588	113,501	99,141	54,899	825,659
1983	42,954	19,741	31,442	117,021	113,192	7,132	21,739	47,478	60,419	150,914	131,734	87,033	830,799
1984	89,274	86,761	83,020	45,571	32,110	1,643	5,741	15,403	44,273	151,799	138,801	126,044	820,440
1985	122,608	101,973	109,706	103,691	76,373	5,761	15,068	31,845	74,431	135,649	120,706	101,397	999,208
1986	100,944	90,725	92,300	55,209	34,686	4,571	22,594	51,856	65,471	100,083	85,758	55,760	759,957
1987	64,313	91,218	102,061	109,556	78,844	11,084	21,766	49,305	54,613	104,732	86,990	38,132	812,614
1988	34,930	23,359	42,004	79,705	64,863	17,276	21,143	70,093	89,787	138,916	125,247	59,986	767,309
1989	64,530	97,371	114,086	138,839	115,534	12,229	21,813	55,588	57,438	91,616	79,549	45,266	893,859
1990	47,954	48,038	59,294	70,866	64,033	7,094	17,320	61,740	75,249	124,933	109,196	57,419	743,136
1991	58,192	62,363	72,180	55,839	28,232	25,793	12,423	49,386	92,616	87,441	67,367	56,773	668,605
1992	23,542	41,104	56,612	53,088	43,483	33,190	1,468	40,461	101,399	98,612	71,789	63,634	628,382
1993	28,731	35,134	81,967	57,852	43,655	35,225	23,087	83,707	132,774	131,637	92,908	79,842	826,519
1994	35,689	43,940	64,651	60,384	53,745	48,101	26,132	55,042	140,815	101,537	73,363	60,078	763,477
1995	41,269	51,522	89,471	74,046	60,349	58,172	52,252	67,447	115,692	110,787	83,157	70,596	874,760
1996	21,612	22,297	43,097	41,491	42,562	30,709	19,654	43,646	58,302	60,245	58,302	45,690	487,607
1997	30,531	36,804	56,626	64,487	97,879	69,437	32,582	70,509	125,701	89,801	56,659	32,022	763,038
1998	16,229	40,359	59,336	66,936	77,214	67,504	59,159	83,219	113,816	109,481	91,656	80,749	865,658
1999	49,606	68,515	108,920	88,494	62,330	37,846	4,456	38,054	72,525	73,471	68,811	49,251	722,279
2000	30,662	43,430	64,079	46,265	27,992	18,108	2,716	42,493	73,399	75,846	73,399	75,846	574,235
2001	75,846	68,505	75,846	74,797	86,884	84,080	86,884	86,884	84,080	86,884	84,080	86,884	981,654
2002	86,884	78,228	86,576	83,782	86,576	83,782	86,576	86,576	83,782	86,606	33,190	6,455	889,013
2003	6,394	5,779	6,472	6,263	6,472	7,166	7,945	7,945	12,535	14,774	14,298	14,774	110,817
2004	14,774	9,055		5,296	8,209	3,395	2,567	5,740	13,059	13,494	13,059	10,194	98,842
2005	7,100												
2006													
Ave.	52,210	57,267	76,701	74,859	58,436	28,037	25,281	50,303	78,258	103,121	83,610	59,294	746,287



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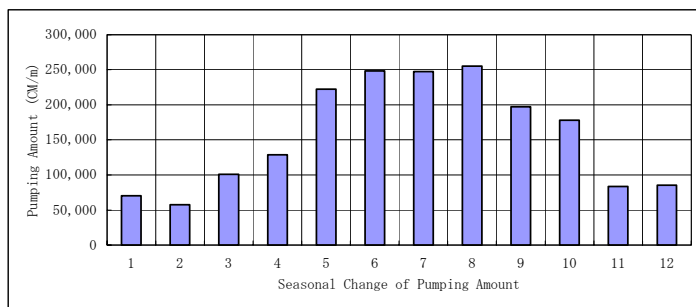
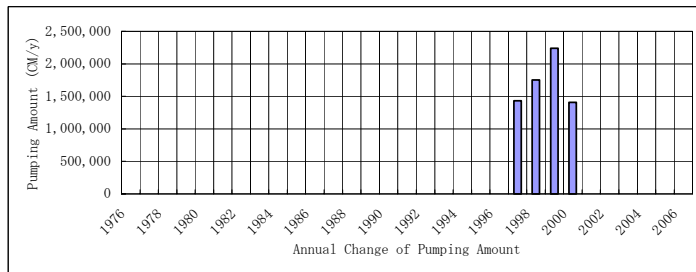
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	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	120,366	130,067	160,547	347,697	407,836	199,618	159,913	237,777	356,538	409,737	299,412	160,062	2,989,570
1977	174,432	257,378	299,435	338,414	226,685	149,697	159,848	223,410	310,285	261,132	181,729	105,664	2,688,109
1978	130,184	170,383	227,240	253,514	194,848	115,043	140,850	167,011	266,692	322,022	166,751	118,501	2,273,039
1979	172,958	185,938	218,783	199,375	180,450	163,946	217,031	219,718	353,517	393,068	236,953	124,614	2,666,351
1980	34,000	34,041	137,221	158,436	194,661	191,948	167,237	165,838	227,077	385,199	335,643	88,061	2,119,362
1981	79,682	81,805	134,380	201,722	155,834	78,202	106,076	155,203	221,685	401,539	334,563	191,406	2,142,097
1982	151,336	86,208	121,944	207,081	180,109	86,320	103,550	183,967	232,296	333,132	262,044	73,120	2,021,107
1983	52,965	31,328	58,436	238,729	264,699	121,036	166,891	281,851	330,043	428,443	338,225	200,350	2,512,996
1984	198,249	223,322	229,280	172,336	185,803	137,602	147,812	184,028	248,395	440,356	370,691	303,327	2,841,201
1985	290,889	229,254	323,484	381,353	321,820	138,579	145,817	209,966	345,178	493,600	393,716	270,755	3,544,411
1986	250,774	203,460	293,915	308,072	266,025	204,740	243,053	319,631	387,798	496,531	362,199	90,992	3,427,190
1987	108,714	200,584	249,533	489,019	422,890	256,705	343,610	481,166	490,383	608,878	511,858	245,147	4,408,487
1988	204,111	119,699	263,788	566,591	513,939	240,001	230,059	447,326	455,064	488,850	435,730	140,787	4,105,945
1989	136,553	223,998	319,592	521,266	444,675	124,143	165,451	338,510	416,186	581,419	457,605	170,644	3,900,042
1990	144,024	138,995	295,765	429,509	431,391	232,514	300,944	435,475	467,334	674,052	600,657	460,243	4,610,903
1991	432,152	285,020	310,359	336,569	304,386	201,643	132,950	318,817	537,557	536,444	409,073	314,521	4,119,491
1992	75,968	107,294	171,657	179,581	233,390	199,701	79,020	171,607	302,006	282,977	208,758	191,877	2,203,836
1993	120,851	122,494	247,916	235,099	222,502	177,259	130,448	304,235	441,077	454,605	358,470	283,724	3,098,680
1994	149,058	164,002	267,134	267,936	251,424	206,874	133,720	237,494	476,630	315,527	188,451	144,018	2,802,268
1995	100,713	138,861	262,113	261,098	248,440	200,060	166,572	254,878	543,466	487,777	270,219	239,607	3,173,804
1996	131,179	139,098	238,890	302,629	373,544	261,738	209,897	397,893	470,956	468,269	453,159	329,501	3,776,753
1997	152,566	162,375	476,769	745,621	1,191,144	1,025,497	878,737	1,023,528	1,232,306	931,183	597,853	501,227	8,918,806
1998	410,382	557,605	747,184	952,044	1,232,600	1,103,883	1,001,532	1,189,047	1,358,805	1,212,750	781,673	706,134	11,253,639
1999	480,269	649,722	1,088,094	1,076,312	1,173,785	1,075,138	1,097,898	1,205,997	1,277,716	1,257,858	1,057,106	745,467	12,185,362
2000	407,245	588,455	958,516	1,077,696	1,264,033	1,163,014	1,203,422	315,636	342,433	336,721	325,859	336,721	8,319,751
2001	336,721	304,136	336,721	320,588	336,909	326,044	336,909	336,909	326,044	336,909	326,044	336,909	3,960,843
2002	336,909	336,049	382,658	370,316	382,658	370,316	382,658	382,658	370,316	382,658	404,745	463,962	4,565,903
2003	445,990	337,839	155,257	146,716	169,389	131,866	124,938	118,835	158,722	183,960	178,026	157,628	2,309,166
2004	138,593	139,288	168,918	167,637	183,424	104,479	70,443	121,915	241,762	121,223	94,374	23,816	1,575,872
2005	8,767												
2006													
Ave.	199,220	218,921	315,363	388,033	412,389	309,917	301,631	359,666	454,768	483,683	377,296	259,268	4,086,724



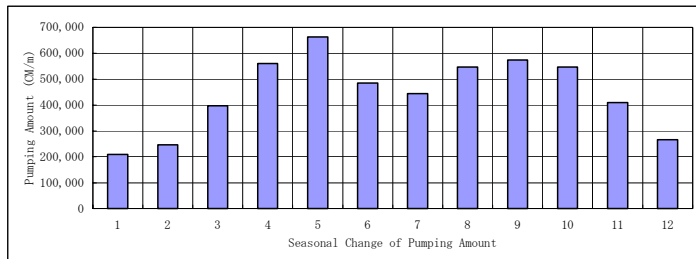
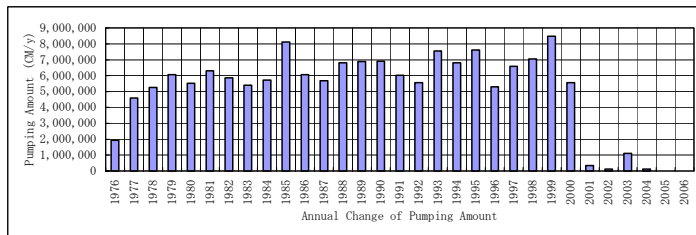
PMD_Code W19-18
 PN_Name_E
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 GR_Governate_E

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976													
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1996													
1997			3,587	107,600	236,977	229,333	215,082	216,070	215,379	139,753	33,143	33,602	1,430,526
1998	14,218	19,604	119,048	115,208	135,480	274,556	258,997	268,615	134,326	138,803	134,326	138,897	1,752,078
1999	138,458	101,174	143,967	146,400	253,335	236,016	263,030	292,163	242,520	255,232	82,921	83,901	2,239,117
2000	57,839	51,339	138,060	145,691	262,925	253,800	251,518	244,522					1,405,694
2001													0
2002													0
2003													0
2004													0
2005													
2006													
Ave.	70,172	57,372	101,166	128,725	222,179	248,426	247,157	255,343	197,408	177,929	83,463	85,467	853,427



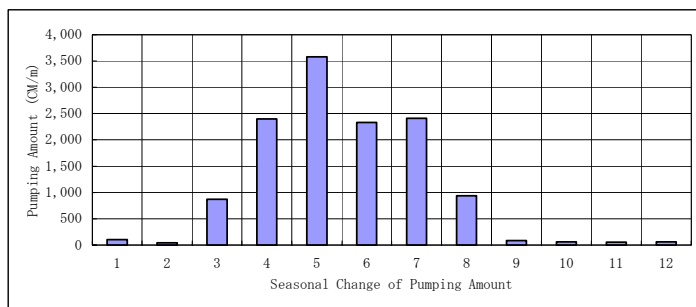
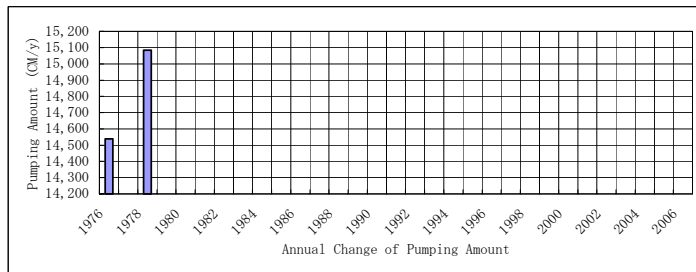
PMD_Code W19-19
 PN_Name_E
 LOC_Name_E
 GR_Governate_E

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	89,152	148,893	127,723	300,423	351,719	122,006	103,180	93,765	194,073	189,791	142,015	64,038	1,926,778
1977	51,710	151,266	177,809	299,568	725,431	586,766	563,323	609,977	513,432	450,008	316,585	154,585	4,600,460
1978	120,181	494,947	557,736	580,010	720,456	544,706	566,787	611,292	442,871	382,552	110,305	128,633	5,260,476
1979	204,018	492,339	769,744	722,261	756,481	483,875	436,230	386,711	501,095	615,613	502,378	193,990	6,064,735
1980	40,367	78,853	120,974	642,684	890,158	523,853	461,279	553,175	705,150	786,163	528,841	179,606	5,511,103
1981	80,179	152,487	723,605	745,148	727,087	524,595	454,880	557,604	738,516	719,031	474,940	413,622	6,311,694
1982	402,409	248,852	377,539	636,243	698,348	394,303	579,887	571,979	680,617	662,700	337,011	261,212	5,851,100
1983	252,641	145,285	258,753	595,189	754,850	517,172	394,823	509,041	721,855	552,907	358,452	341,007	5,401,975
1984	314,412	517,524	283,525	679,262	745,614	462,268	458,246	571,058	543,633	306,184	451,148	394,890	5,727,764
1985	495,264	231,896	653,283	792,212	836,251	544,616	564,161	725,983	551,332	643,815	1,378,573	703,942	8,121,328
1986	334,609	386,820	592,608	586,547	573,362	446,249	465,864	640,917	697,461	850,647	282,473	195,873	6,053,430
1987	187,294	418,988	535,498	823,148	804,389	596,196	515,130	149,395	298,765	550,017	508,629	288,210	5,675,659
1988	118,652	162,367	351,478	769,549	961,576	705,829	531,587	763,447	863,389	801,807	541,303	244,282	6,815,266
1989	199,706	305,516	532,665	893,576	967,154	632,401	600,621	557,585	795,236	751,339	450,715	197,185	6,883,699
1990	119,164	182,438	475,821	712,807	799,143	593,745	564,299	665,202	788,662	799,107	680,062	521,427	6,901,877
1991	281,510	251,175	378,408	543,472	722,512	501,695	313,917	613,496	827,095	818,445	466,716	307,501	6,025,942
1992	150,468	88,767	419,746	639,486	785,900	203,758	194,262	681,021	789,239	848,114	486,800	274,427	5,561,988
1993	214,363	264,998	552,480	655,851	754,049	870,434	601,935	831,059	903,704	872,201	688,780	536,160	7,546,014
1994	364,515	301,379	530,943	731,364	856,583	720,067	651,059	888,170	885,492	344,691	347,847	181,219	6,803,329
1995	300,091	358,697	662,996	710,872	726,869	695,242	693,635	759,649	934,670	879,038	554,498	342,595	7,618,852
1996	386,928	426,759	480,014	509,466	731,934	695,892	578,620	835,149	211,314	149,825	144,992	149,825	5,300,718
1997	176,228	316,195	232,523	566,232	705,791	733,363	523,289	785,400	887,575	817,554	534,907	316,635	6,595,692
1998	233,625	166,965	335,685	464,342	753,694	646,285	530,281	834,127	897,855	937,256	652,941	596,013	7,049,069
1999	463,595	554,714	741,811	725,559	848,396	708,125	454,222	490,506	1,008,928	1,023,495	837,732	621,822	8,478,905
2000	597,467	200,723	441,262	708,588	827,135	624,700	896,185	982,685	66,498	68,715	66,498	68,715	5,549,171
2001	68,715	62,065	68,715	64,610	10,197	9,869	10,197	10,197	9,869	10,197	9,869	10,197	344,697
2002	10,197	9,211	10,197	9,869	10,197	9,869	10,197	10,197	9,869	10,197	9,869	6,506	116,375
2003	2,024	21,515	124,081	121,261	160,742	155,557	160,742	160,742	155,557	20,088	14,903	9,756	1,106,968
2004	5,108	4,778	5,340	11,920	12,369	12,694	13,117	13,117	12,694	12,978	8,527	6,959	119,601
2005	3,068												
2006													
Ave.	208,922	246,428	397,344	560,052	662,703	485,039	444,550	546,988	573,671	547,396	409,942	265,891	5,356,023



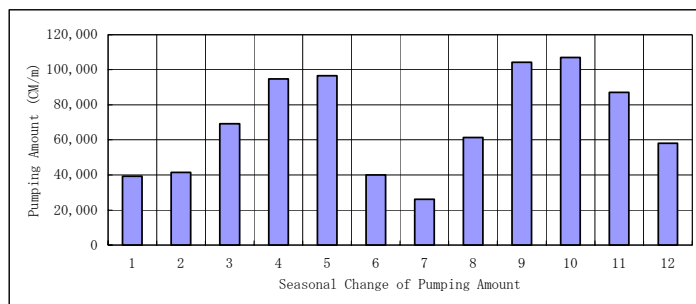
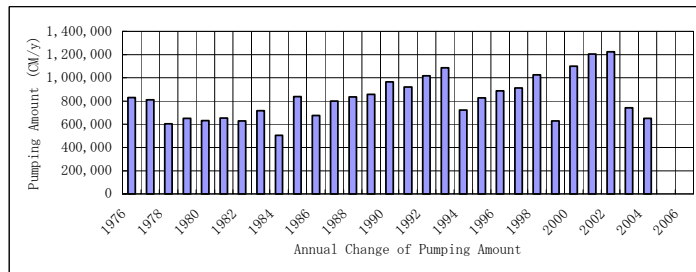
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 LOC_Name_E
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	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	153	28	30	4,464	4,672	1,657	1,713	1,713	110				14,540
1977													
1978			2,513	2,943	3,110	3,010	3,110	159	59	61	59	61	15,085
1979	61	55	61	4									
1980													
1981				2,189	2,951								
1982													
1983													
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2004													
2005													
2006													
Ave.	107	42	868	2,400	3,578	2,334	2,412	936	85	61	59	61	14,813



PMD_Code W20-17
 PN_Name_E
 LOC_Name_E
 GR_Governate_E

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976	43,731	34,719	31,139	65,152	154,840	20,758	23,833	33,762	119,557	128,754	112,167	61,267	829,679
1977	24,235	94,124	86,573	80,461	43,218	10,203	16,806	65,071	117,088	121,033	106,114	45,016	809,942
1978	34,576	98,137	96,568	60,847	25,720	16,432	13,489	37,140	62,046	73,790	56,700	29,437	604,882
1979	54,206	63,893	44,753	24,369	16,797	13,728	22,985	33,381	113,334	124,370	96,353	41,995	650,164
1980	11,189	8,608	36,393	57,732	50,476	20,605	24,829	20,552	94,901	120,636	119,479	65,486	630,886
1981	25,654	30,570	97,200	76,724	50,590	24,260	14,256	28,613	37,073	81,412	94,811	92,620	653,783
1982	73,583	45,307	33,411	64,036	53,232	29,605	10,543	8,679	72,540	108,706	76,987	51,154	627,783
1983	27,584	19,365	36,950	96,323	99,055	57,200	10,202	6,088	74,377	109,767	88,163	91,221	716,295
1984	41,999	33,681	23,249	29,167	32,412	14,545	7,356	6,926	52,541	92,270	93,999	75,593	503,738
1985	79,721	44,348	86,606	88,025	75,927	39,292	9,750	39,642	95,919	111,912	98,817	69,138	839,097
1986	50,085	43,419	80,547	86,510	77,773	28,402	9,600	8,419	93,942	100,488	60,152	36,570	675,907
1987	33,279	50,976	90,470	117,063	75,064	37,213	20,434	33,962	98,910	107,752	94,107	39,534	798,764
1988	15,224	19,873	60,432	131,887	123,315	37,261	6,883	51,758	132,856	124,164	89,699	42,539	835,891
1989	18,718	44,277	82,369	150,189	117,774	36,405	10,602	49,247	120,122	114,550	68,738	43,403	856,394
1990	12,119	21,205	94,157	139,701	125,442	39,423	10,847	85,868	130,962	114,040	105,390	86,118	965,272
1991	35,179	29,043	77,866	153,910	138,477	34,833	13,820	101,647	121,222	108,789	64,502	41,711	920,999
1992	20,267	17,222	70,634	133,350	176,385	47,058	15,296	116,922	134,560	140,124	99,541	46,295	1,017,654
1993	23,595	31,528	109,019	150,735	131,377	45,508	31,445	130,066	156,135	108,126	98,390	70,430	1,086,354
1994	35,204	25,899	58,213	89,387	100,476	56,656	16,487	64,079	117,750	83,926	50,552	22,648	721,277
1995	31,866	32,715	60,477	83,670	90,971	34,994	20,533	59,484	145,757	131,860	85,347	49,976	827,650
1996	49,157	52,242	66,506	95,769	147,126	50,689	17,686	112,454	76,513	73,927	71,542	73,927	887,538
1997	68,700	18,258	31,104	105,459	150,861	76,020	58,300	66,735	139,781	113,706	61,092	23,275	913,291
1998	25,841	24,011	55,517	99,961	142,361	54,618	14,126	100,577	163,496	150,443	117,018	76,470	1,024,439
1999	38,236	47,621	63,652	58,314	70,214	15,539	4,709	24,440	31,363	95,034	112,792	65,621	627,535
2000	26,435	28,050	69,075	173,914	157,616	25,817	10,756	158,766	164,869	95,559	92,476	95,559	1,098,892
2001	95,559	86,311	95,559	86,679	106,408	102,975	106,408	106,408	102,975	106,408	102,975	106,408	1,205,073
2002	106,408	96,111	106,408	102,975	106,408	102,975	106,408	106,408	102,975	106,408	102,975	79,268	1,225,727
2003	29,269	29,380	72,008	69,914	79,105	76,554	75,593	67,008	64,846	67,008	64,846	47,458	742,989
2004	33,336	31,186	88,795	78,074	78,401	9,809	54,951	56,660	82,259	83,904	37,262	15,800	650,437
2005	10,914												
2006													
Ave.	39,196	41,451	69,160	94,838	96,477	39,979	26,170	61,406	104,161	106,857	87,000	58,136	825,805



PMD_Code W20-18
 PN_Name_E
 LOC_Name_E
 GR_Governate_E

	1	2	3	4	5	6	7	8	9	10	11	12	total
1976				111	1,616		7	21	199	27			1,981
1977			1,625										
1978		2,789	2,126	270					77	1,219	4,256	3,219	13,956
1979	5,990	8,559	5,092	1,720	749	803	706	155	226	4,387	5,613	2,877	36,877
1980	1,434	1,669	4,701	4,876	2,713	590	338	269	3,379	3,444	5,167	3,364	31,944
1981	2,514	3,258	13,600	6,969	1,615	315	421	302	219	5,374	8,372	7,206	50,165
1982	6,537	5,718	2,382	376	712	274	208	183	3,800	8,415	9,622	7,541	45,768
1983	3,643	6,195	10,421	17,337	8,565	818	178	113	4,591	9,204	7,479	7,493	76,037
1984	5,960	7,561	5,310	1,832	412	231	350	379	256	5,273	6,819	8,263	42,646
1985	7,678	2,931	9,375	7,028	1,892	172		360	8,285	17,780	15,551	12,035	83,087
1986	10,179	5,972	8,758	3,846	3,184	459	335	860	8,525	14,551	11,314	7,709	75,692
1987	5,681	8,579	6,433	5,831	3,192	995	287	467	11,560	18,513	14,560	5,204	81,302
1988	769	1,920	4,523	9,717	4,643	687	312	320	8,702	325	20,586	7,481	59,985
1989	3,438	4,696	4,399	10,004	6,086	3,467	1,036	2,057	8,297	16,463	8,077	2,581	70,601
1990	322	2,506	2,971	880	445	499	498	310	9,332	14,901	10,600	3,318	46,582
1991	6,052	2,986	1,929	1,486	712	10,213	12,089	12,089	11,699	12,843	8,698	5,946	86,742
1992	3,676	3,461	7,204	10,129	7,849	729	307	263	1,681	3,028	3,107	2,105	43,539
1993	1,602	1,201	472	426	380	202	156	55					4,494
1994													
1995													
1996													
1997													
1998							55	1,484	67	68	47	170	1,891
1999				1	10	9		30	182	172	18		422
2000					12	365	423	12,355	7,644	6,800	6,580	6,800	40,979
2001	6,800	6,142	6,800	6,477	5,197	5,030	5,197	5,197	5,030	5,197	5,030	5,197	67,294
2002	5,197	4,694	5,197	5,030	5,197	5,030	5,197	5,197	5,030	5,197	5,030	3,310	59,306
2003	1,018	1,480	3,913	3,717	1,757	1,700	3,688	8,409	8,138	8,409	8,138	5,102	55,469
2004	2,714	2,539	6,740	8,553	8,311	705	2,430	3,017	19,972	20,478	15,190		90,649
2005													
2006													
Ave.	4,274	4,243	5,427	4,846	2,966	1,585	1,629	2,343	5,517	7,916	8,175	5,346	48,642

