

**NATIONAL SYMPOSIUM
ON
INTEGRATED WATER
RESOURCES MANAGEMENT**

ANTIGUA & BARBUDA METEOROLOGICAL SERVICES

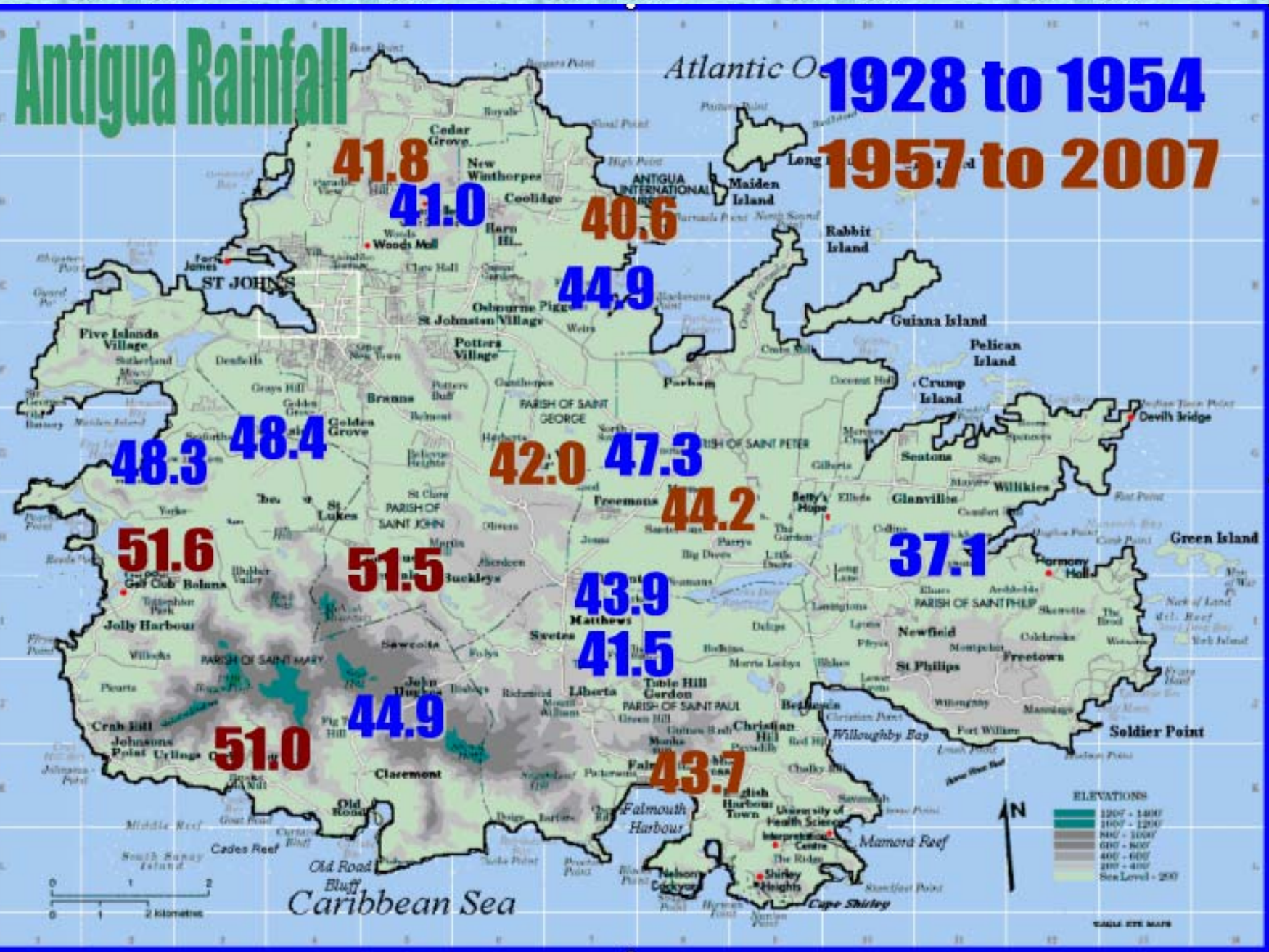
Climate Change and Rainfall In Antigua

Rainfall producing weather systems that affect Antigua and Barbuda annually are typically:

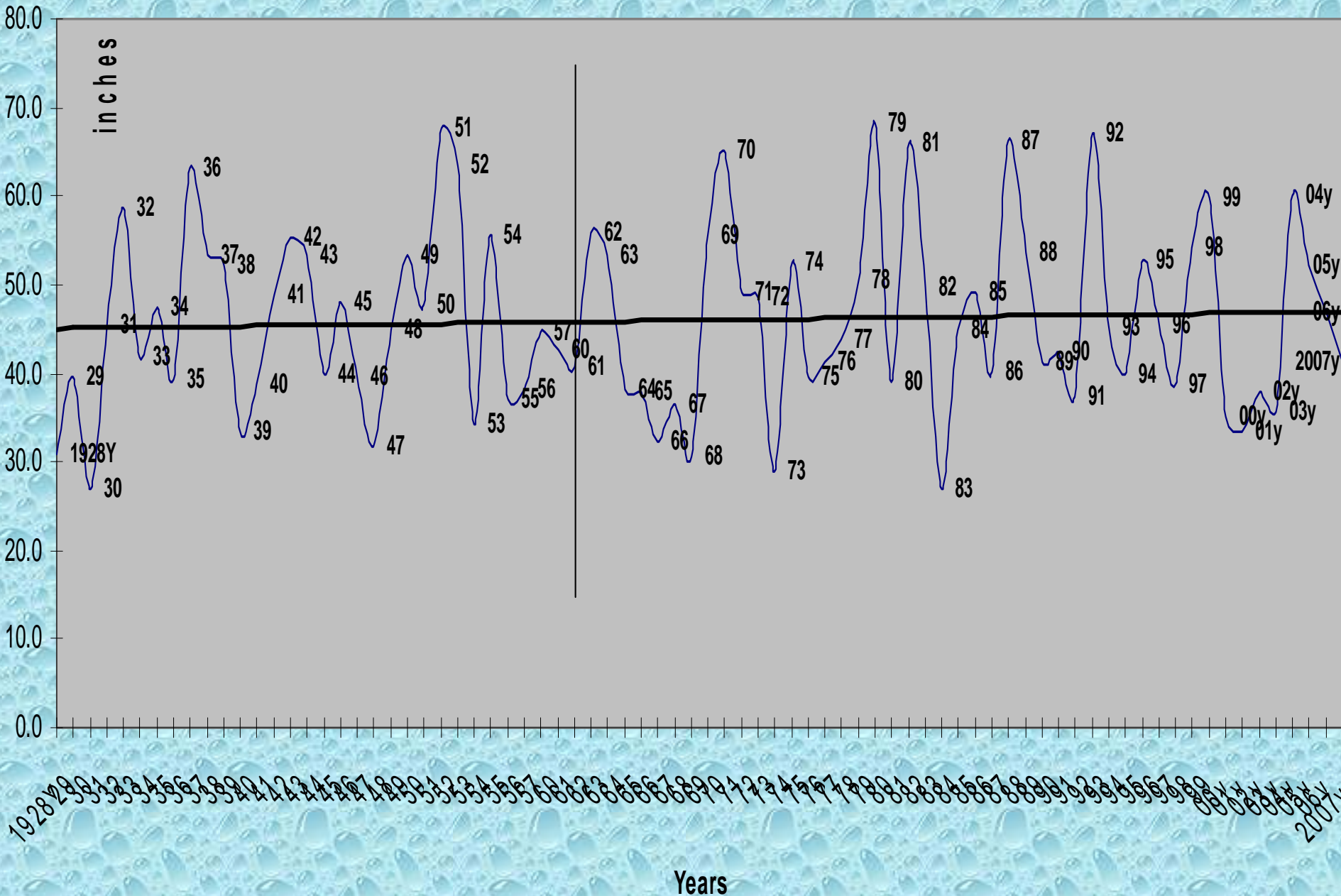
- High pressure ridges**
- Tropical waves**
- Troughs**
- Fronts (mostly cold fronts)**
- Storms/hurricanes.**

Antigua Rainfall

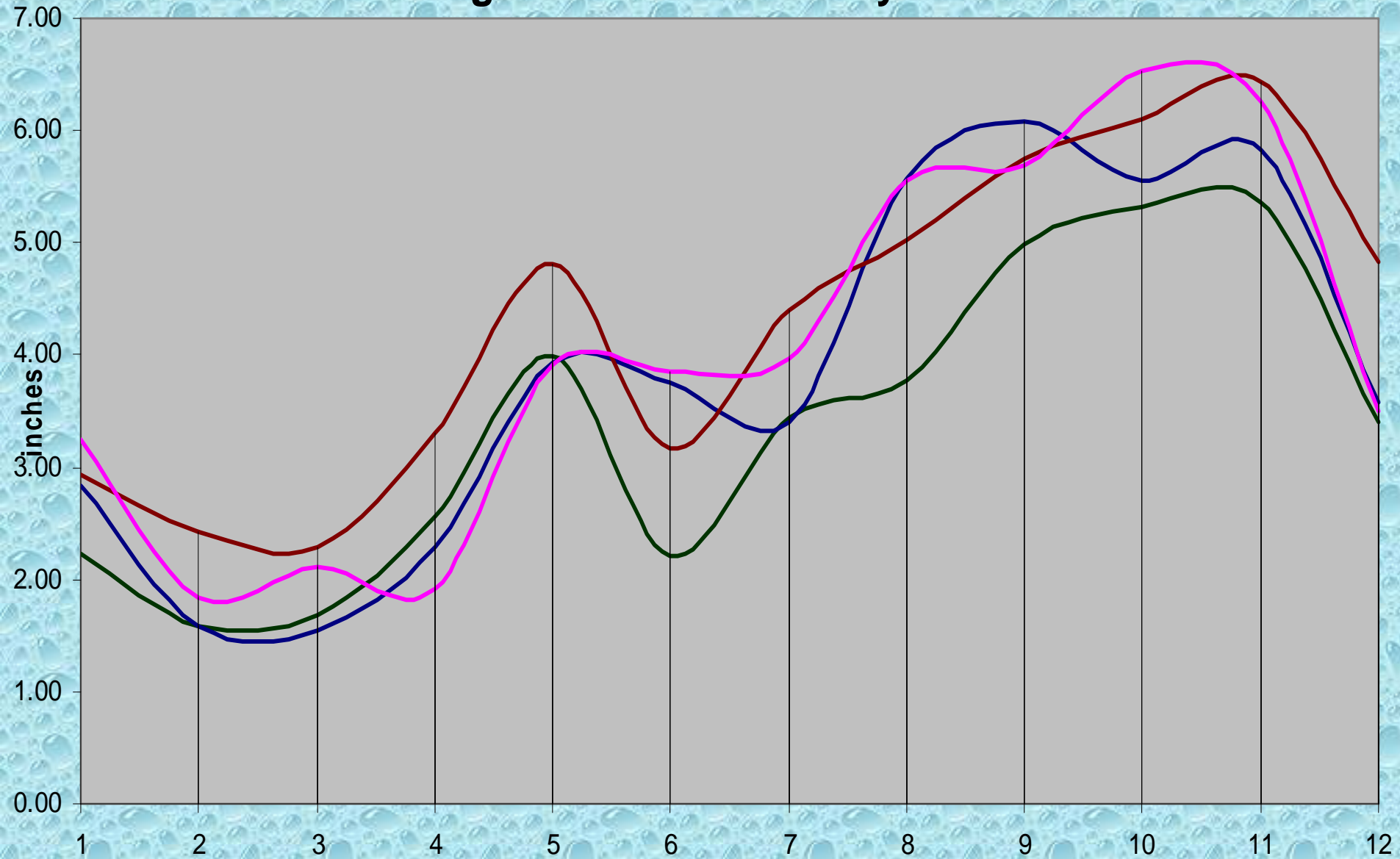
1928 to 1954
1957 to 2007



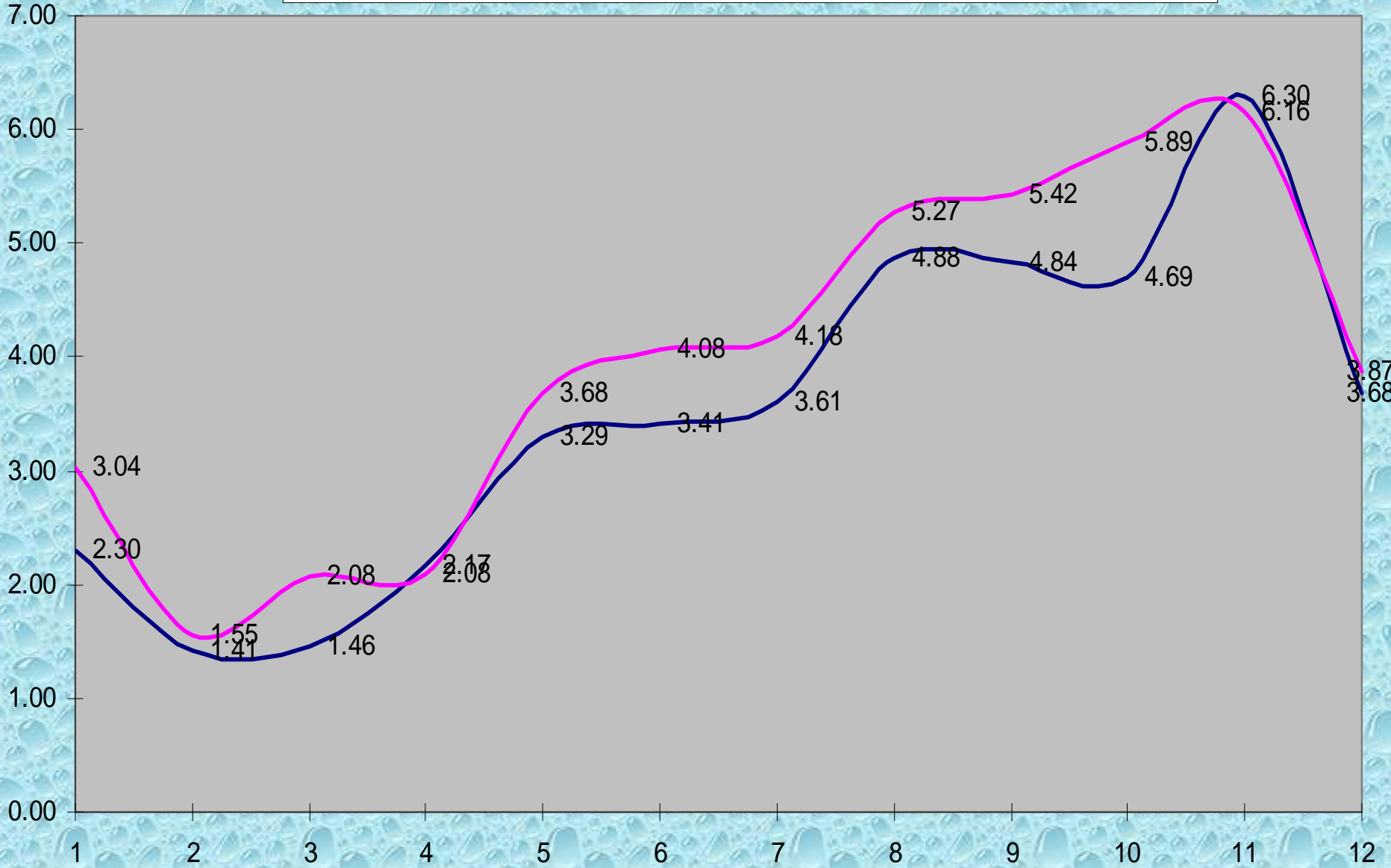
Rainfall- Antigua 1928 - 2007



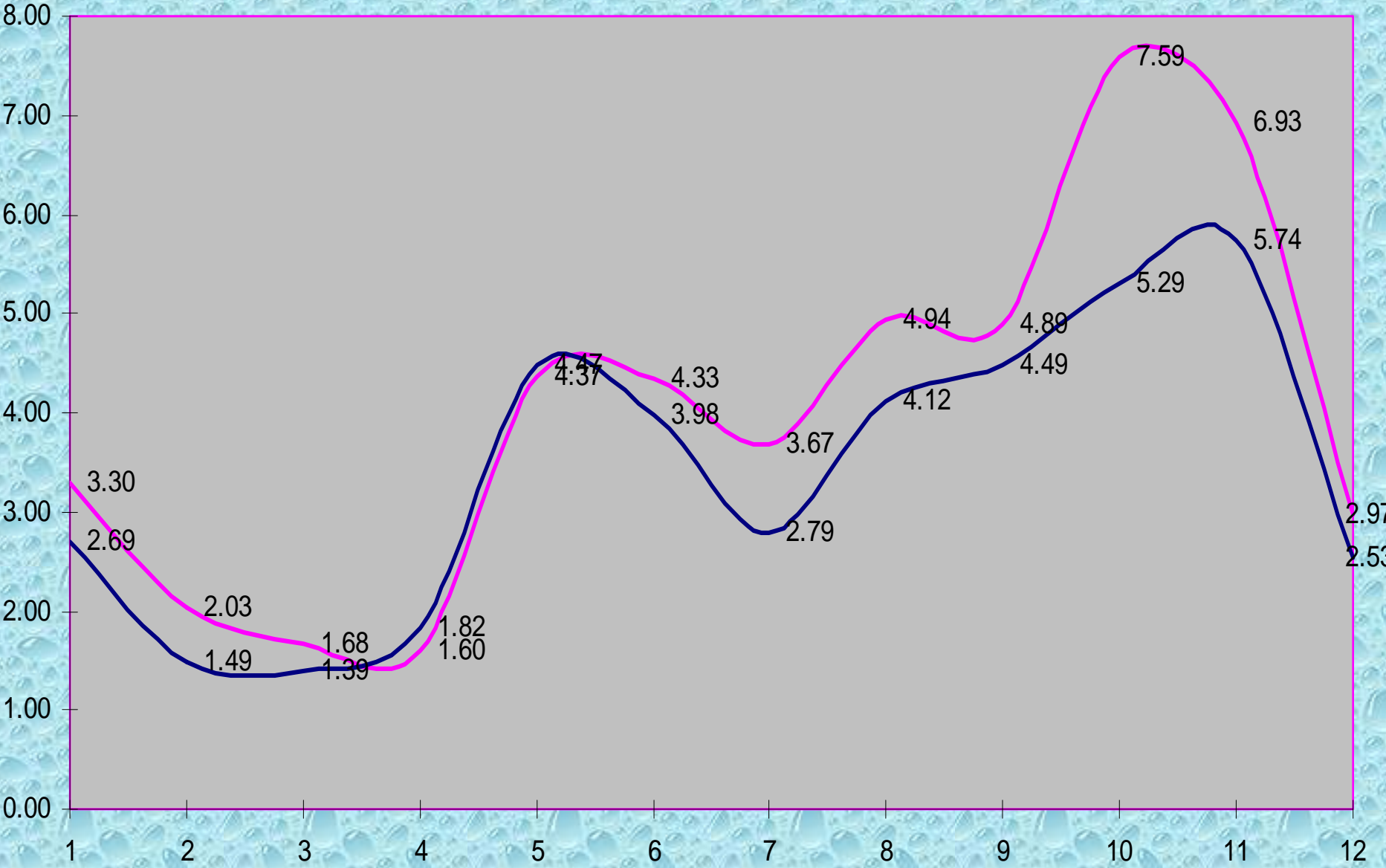
Antigua Historical Monthly Rainfall 1928 - 2007



— Fitches Creek 1928 - 37 **— Creekside 1928 - 37**

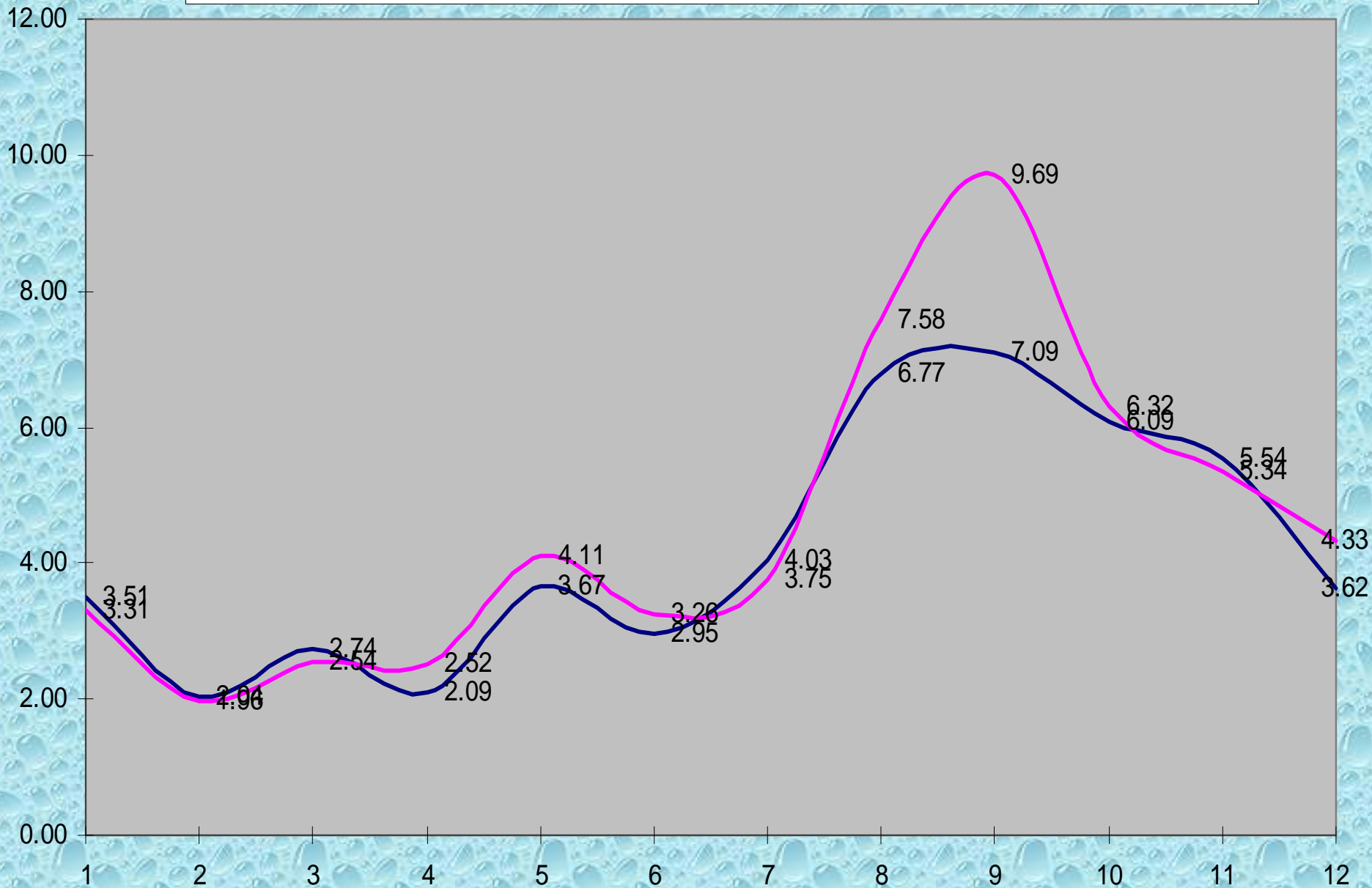


— Creekside 1938 -47 **— Fitches Creek 1938 - 47**



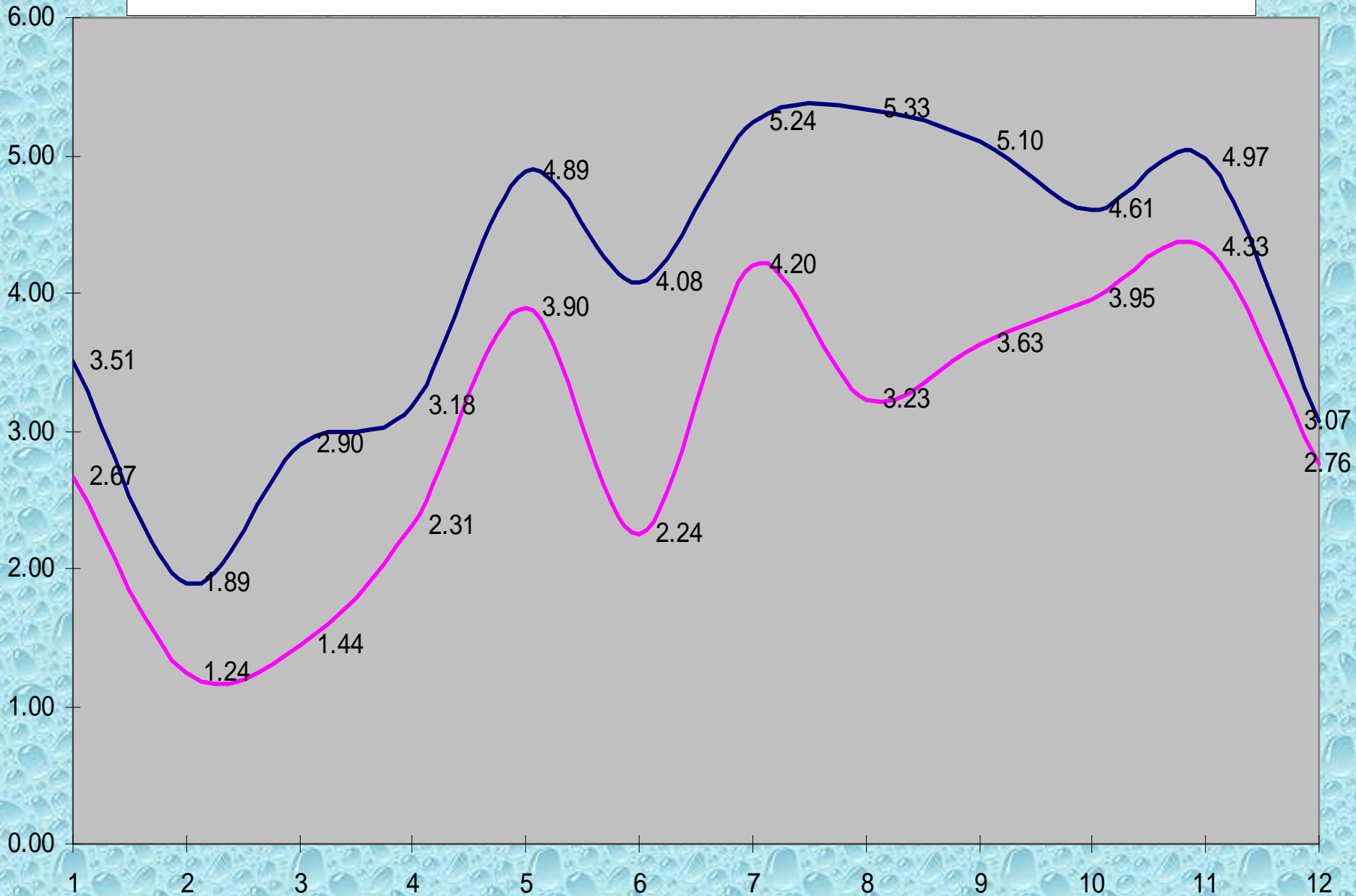
— Creekside 1948 - 54

— Fitches Creek 1948 - 54

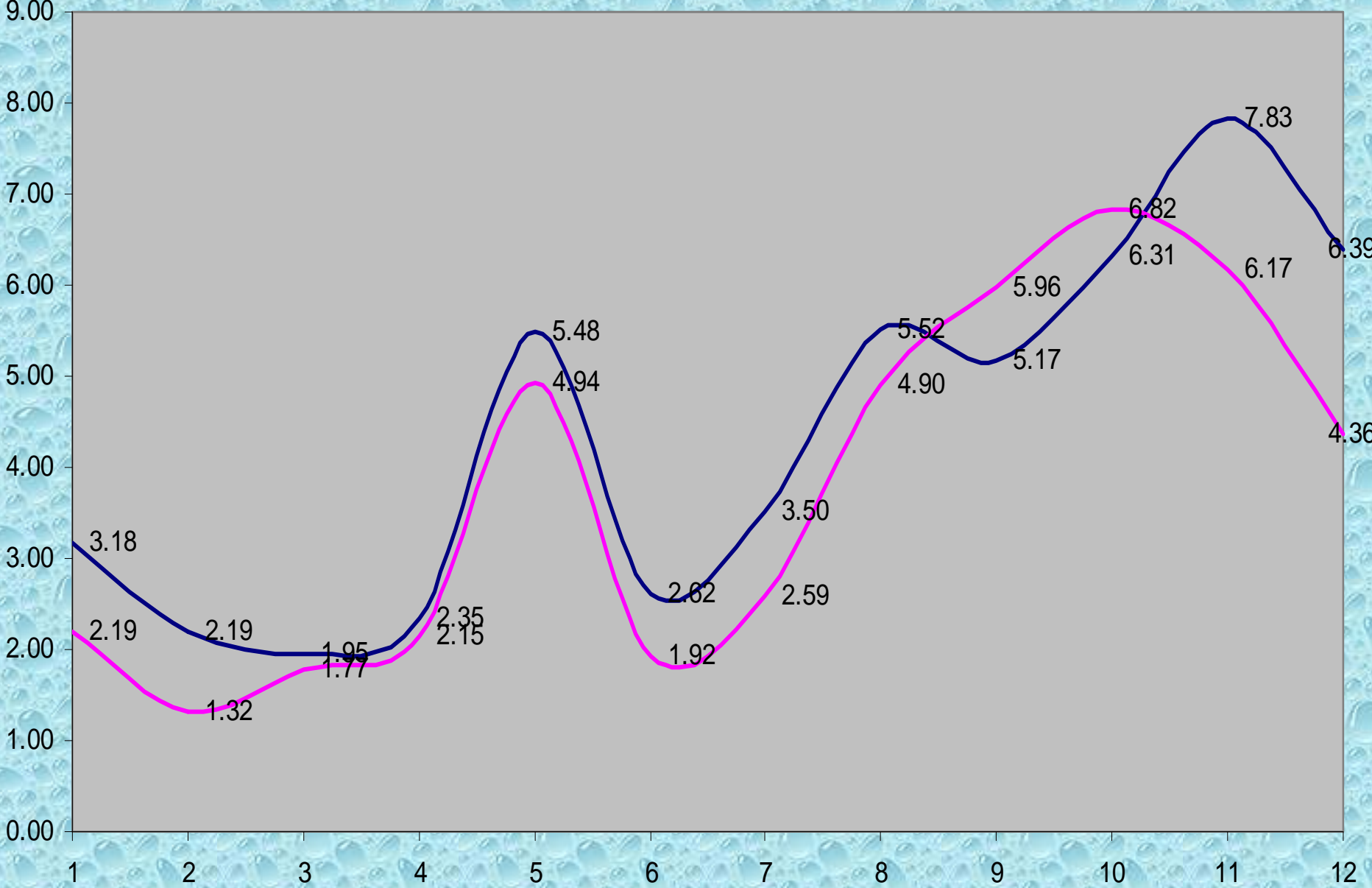


Greencastle 1960 - 69

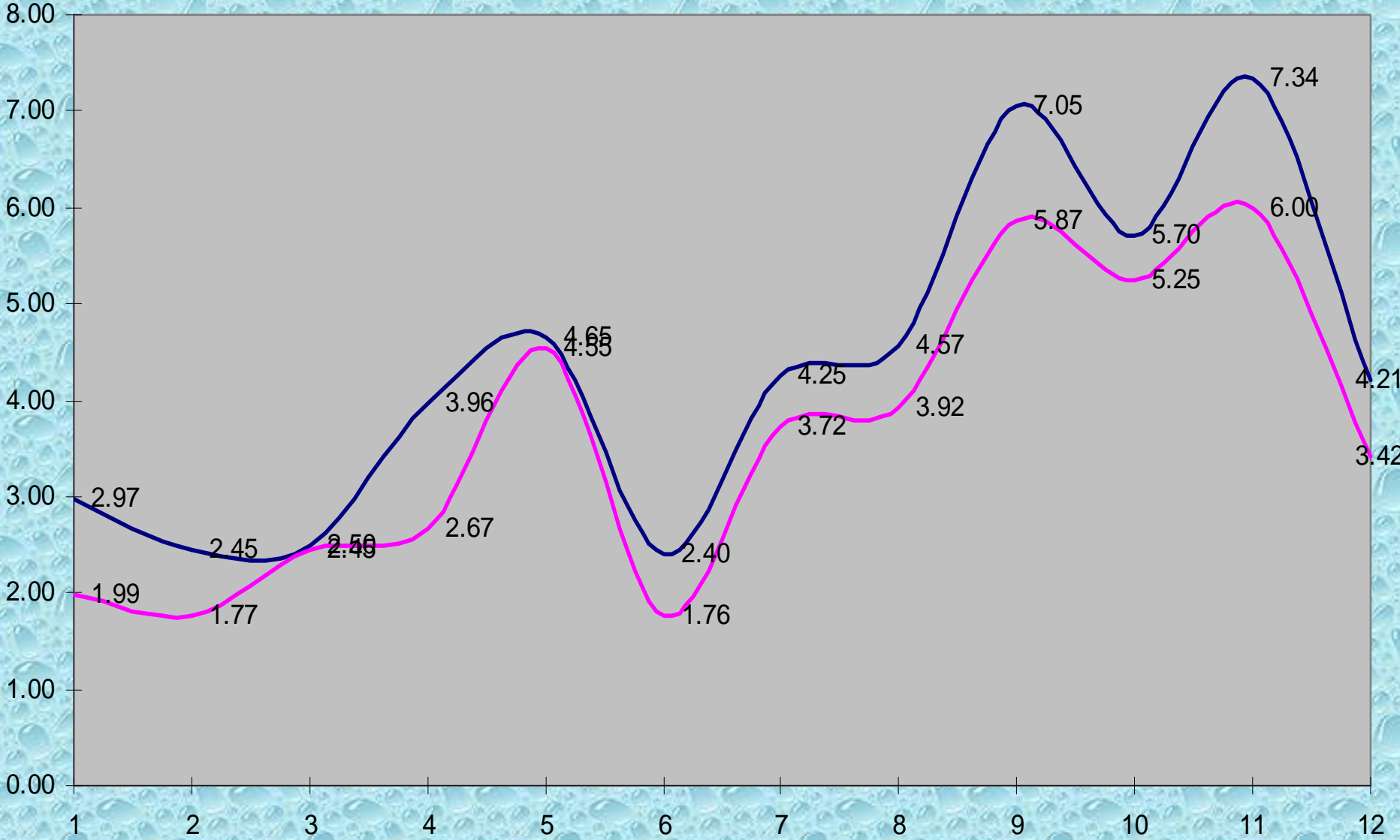
Coolidge 1960 - 69



Greencastle 1970 -79 **Coolidge 1970 - 79**

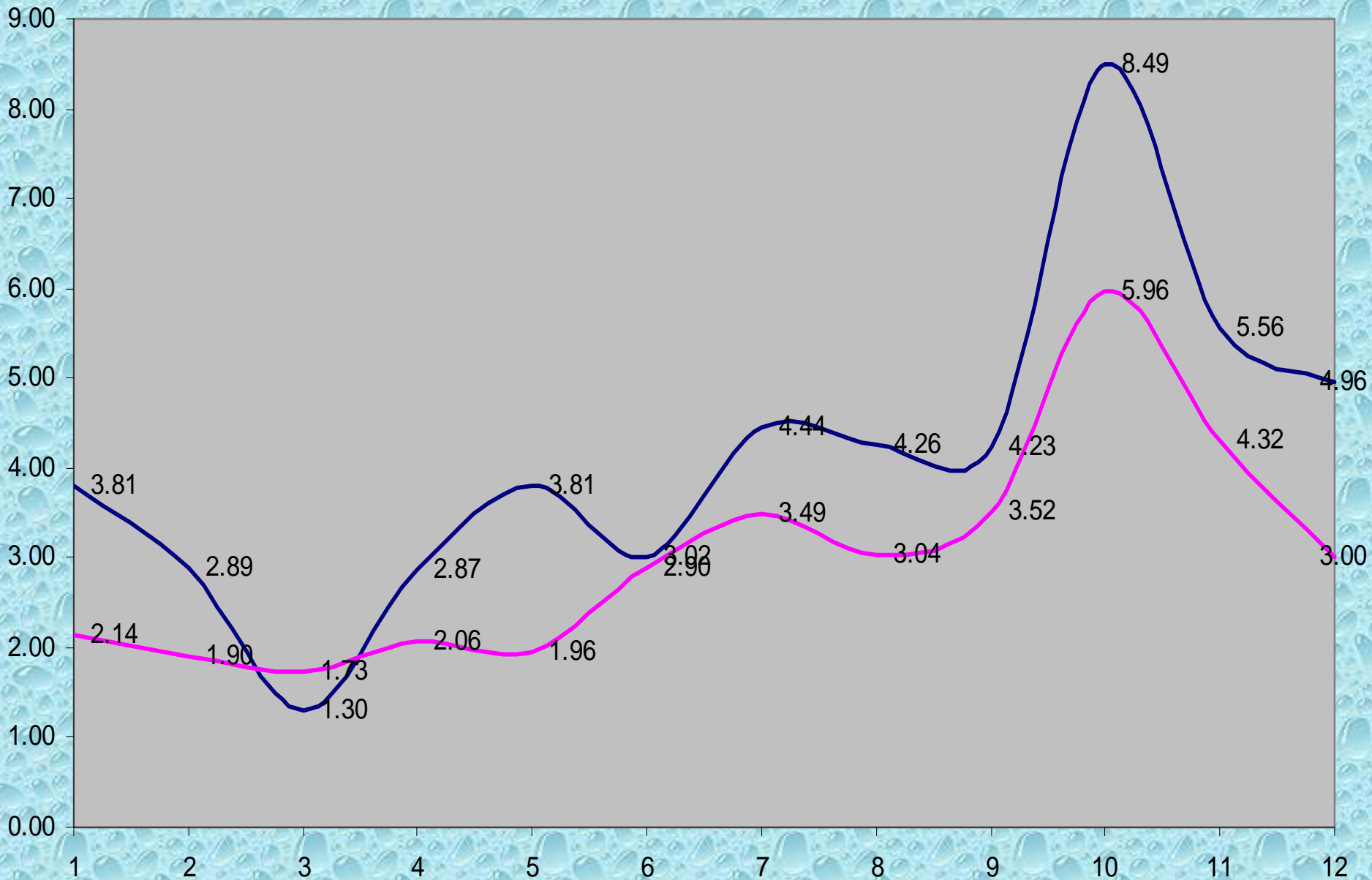


— Greencastle 1980 -89 **— Coolidge 1980 - 89**



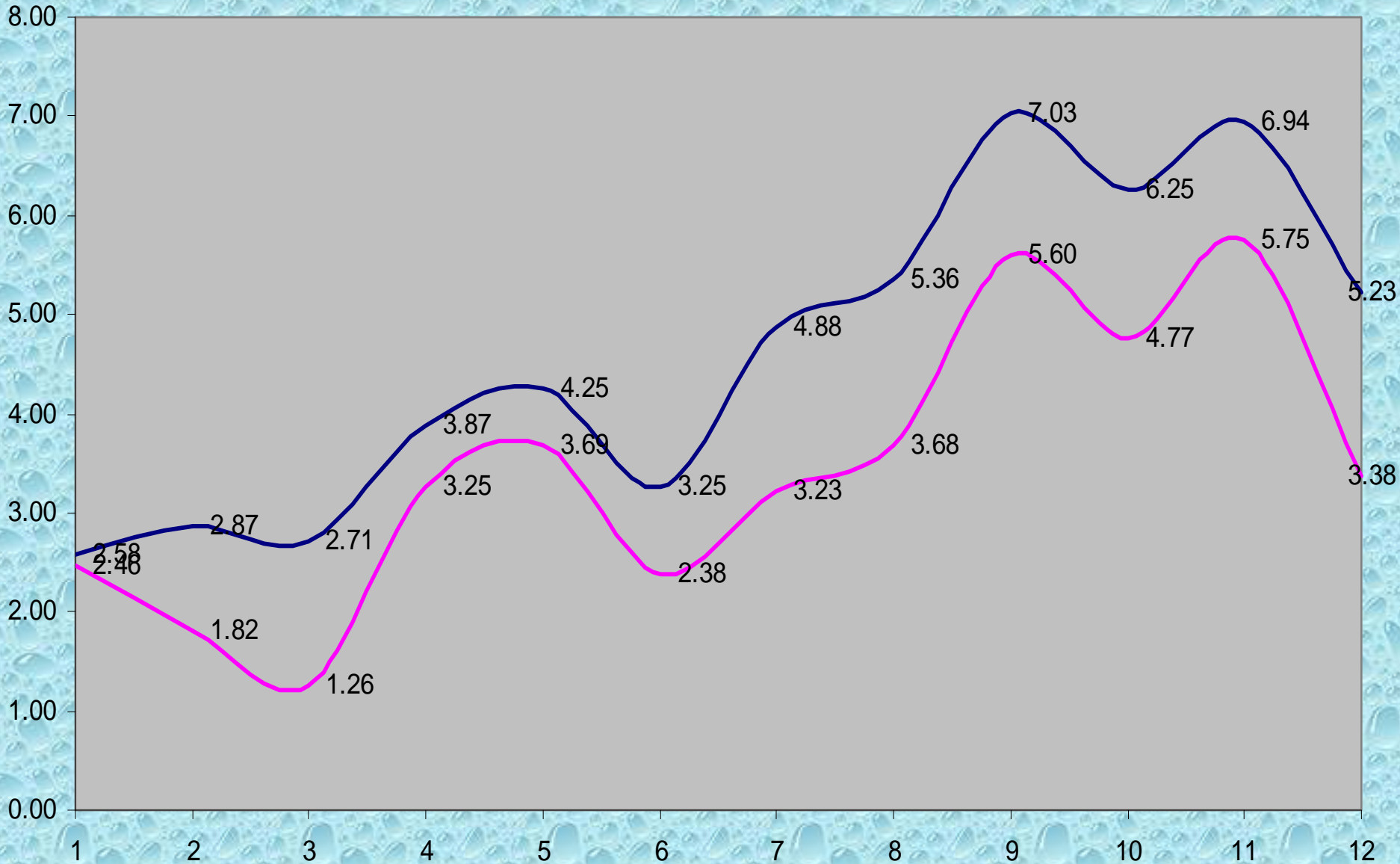
— Greencastle 2000 - 07

— Coolidge 2000 - 07



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- **THE EFFECTS OF CLIMATE CHANGE ON OUR RAINFALL**
 - **RAINFALL DISTRIBUTIONS**
 - **DROUGHTS**

— Greencastle 1990 - 99 **— Coolidge 1990 - 99**



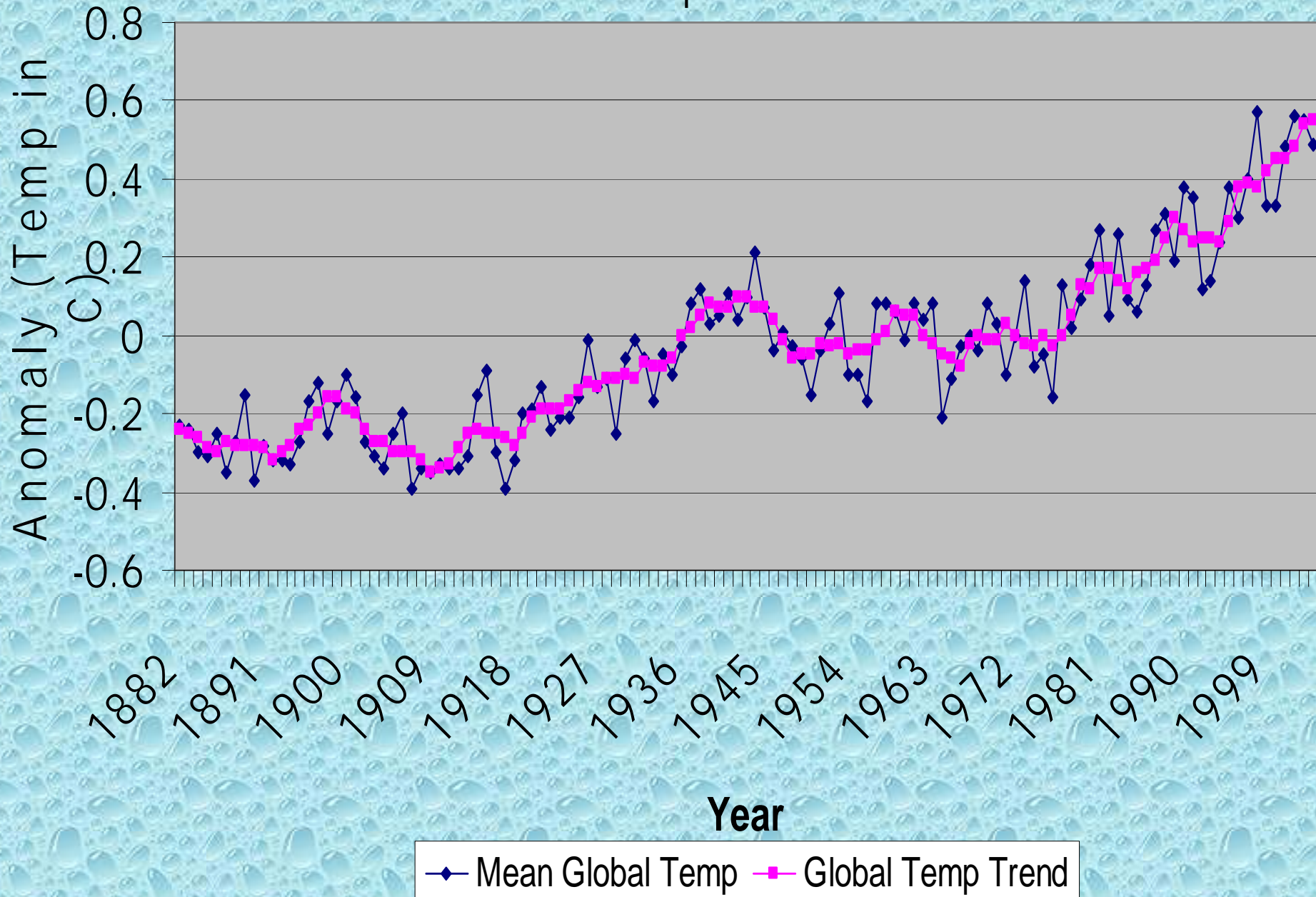
Climate

The average weather conditions at a particular place over a period of time, generally not less than 30 years.

Climate Change

The change in climate attributed directly or indirectly to human activity which, in addition to natural climate variability, is observed over comparable time periods.

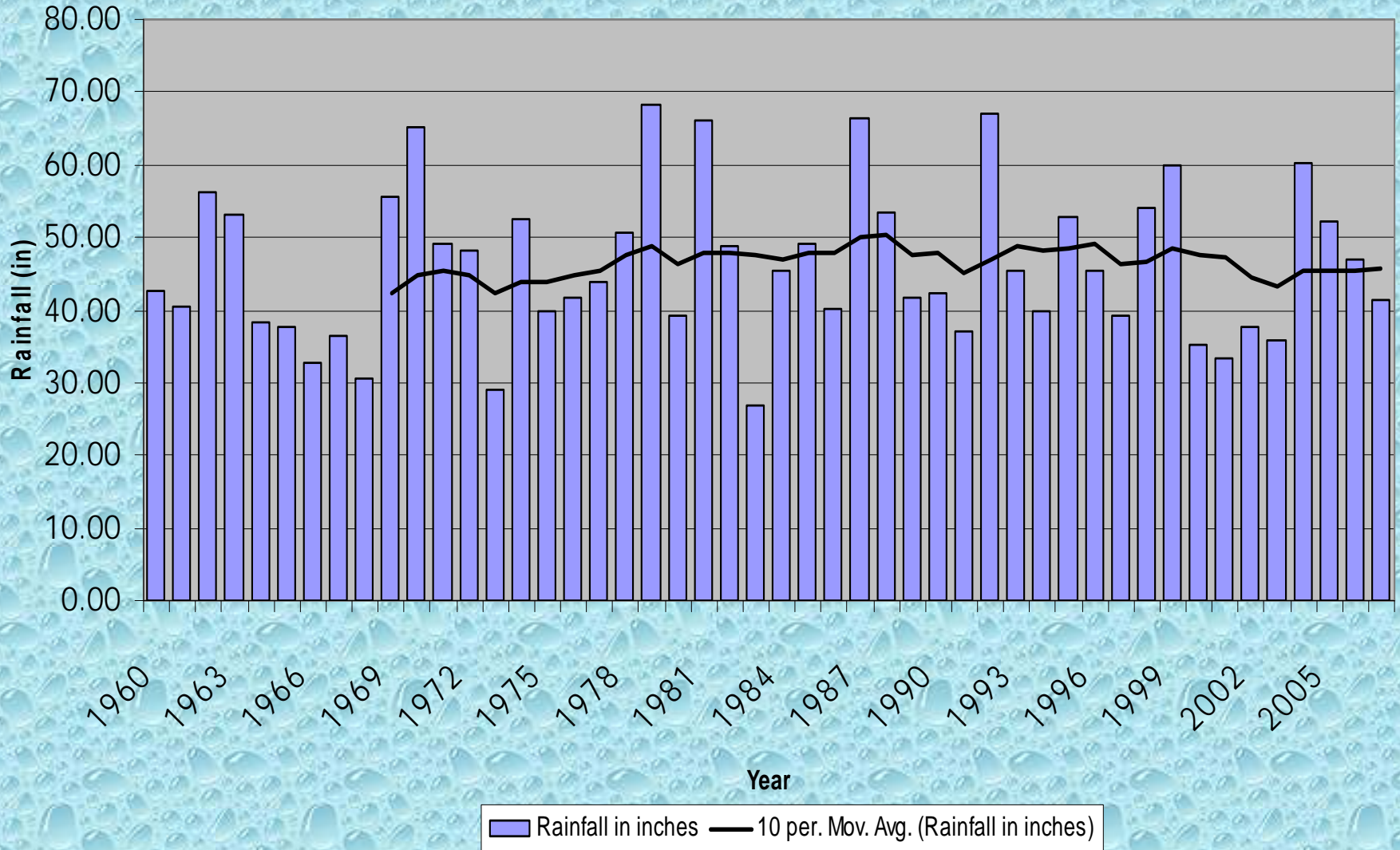
Mean Global Temperature Trend



**Rainfall before departure from mean:
45.68" or 1160.27 mm**

**Rainfall after departure from mean:
46.82" or 1189.23 mm**

Annual Average Rainfall For Antigua For The Period 1960 - 2007



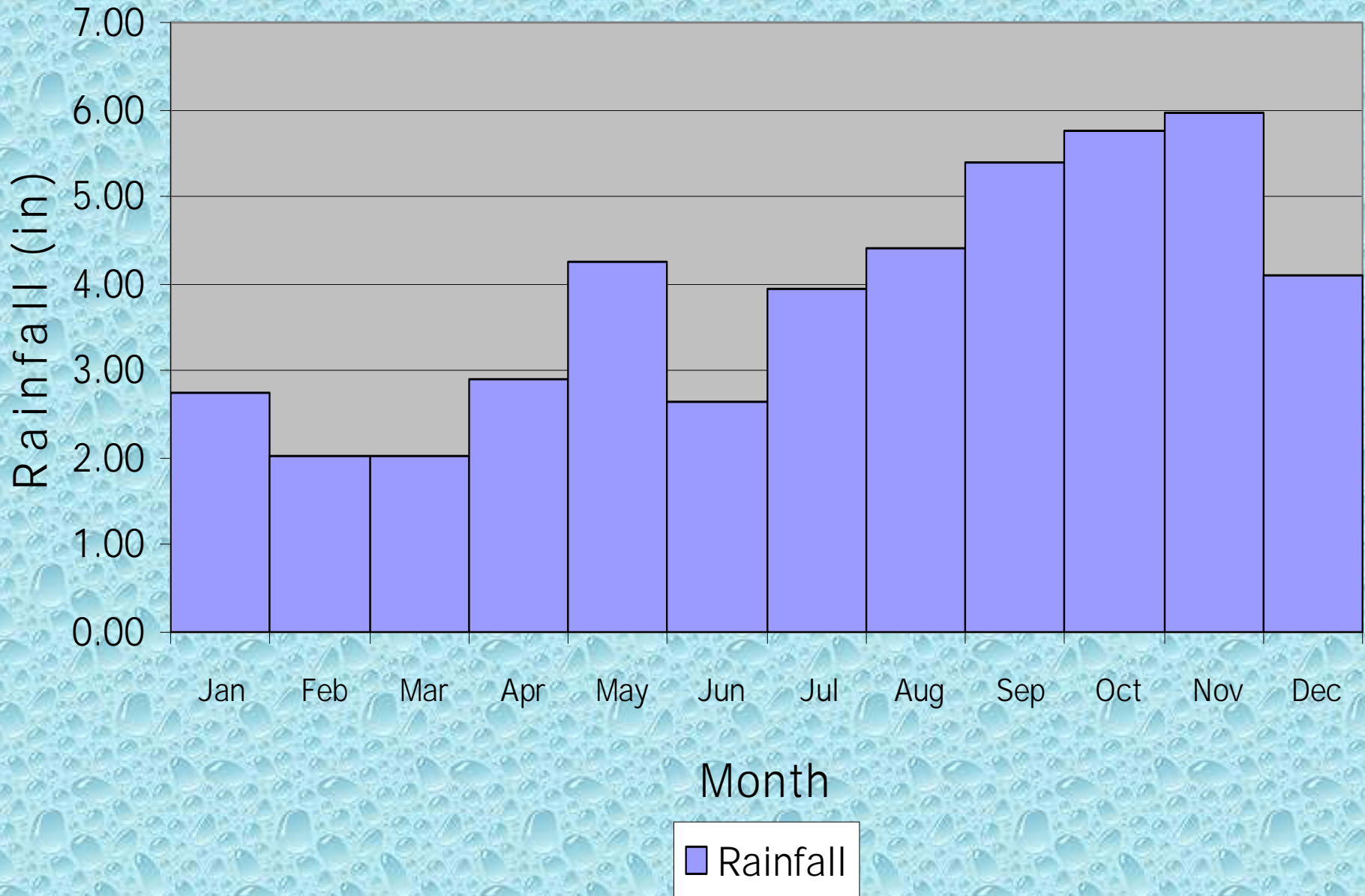
Antigua

The normal annual avg. rainfall:
46.16" or 1172.46 mm

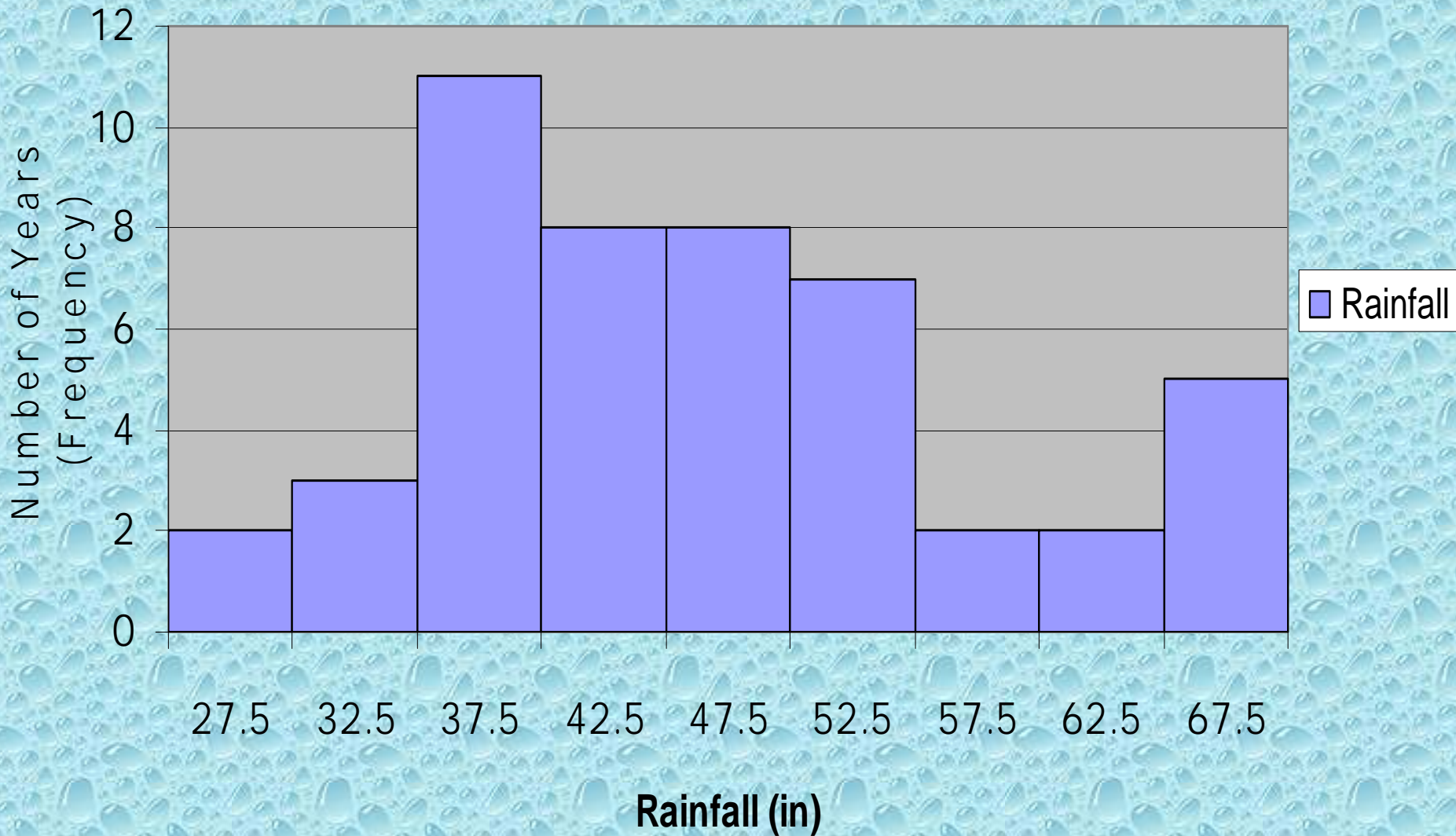
Barbuda

Spring View: 44.31" or 1125.47 mm

Average Monthly Rainfall Totals For Antigua For The Period 1960 - 2007



Average Annual Rainfall Frequency Distribution For Antigua For 1960 - 2007



Drought

A drought is a prolonged, abnormally dry period when there is not enough water for users' normal needs. Drought is not simply low rainfall.

Because people use water in so many different ways, there is no universal definition of drought.

Drought Episodes In Antigua

At the Meteorological Office, we also measure drought and wet episodes in seasons; a season being any three month period.

Example: DJF JFM FMA.

Drought Episodes In Antigua Continues

A drought episode is a continuous set of three seasons or more whose rainfall totals fall in the first tercile of the historical rainfall data.

A wet episode is a continuous set of four seasons or more whose rainfall totals fall in the third tercile of the historical rainfall data.

Drought Episodes In Antigua Continues

By this measure, we experience, on average, a drought episode every 18 months and a wet episode every 34 months.

THE END...

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