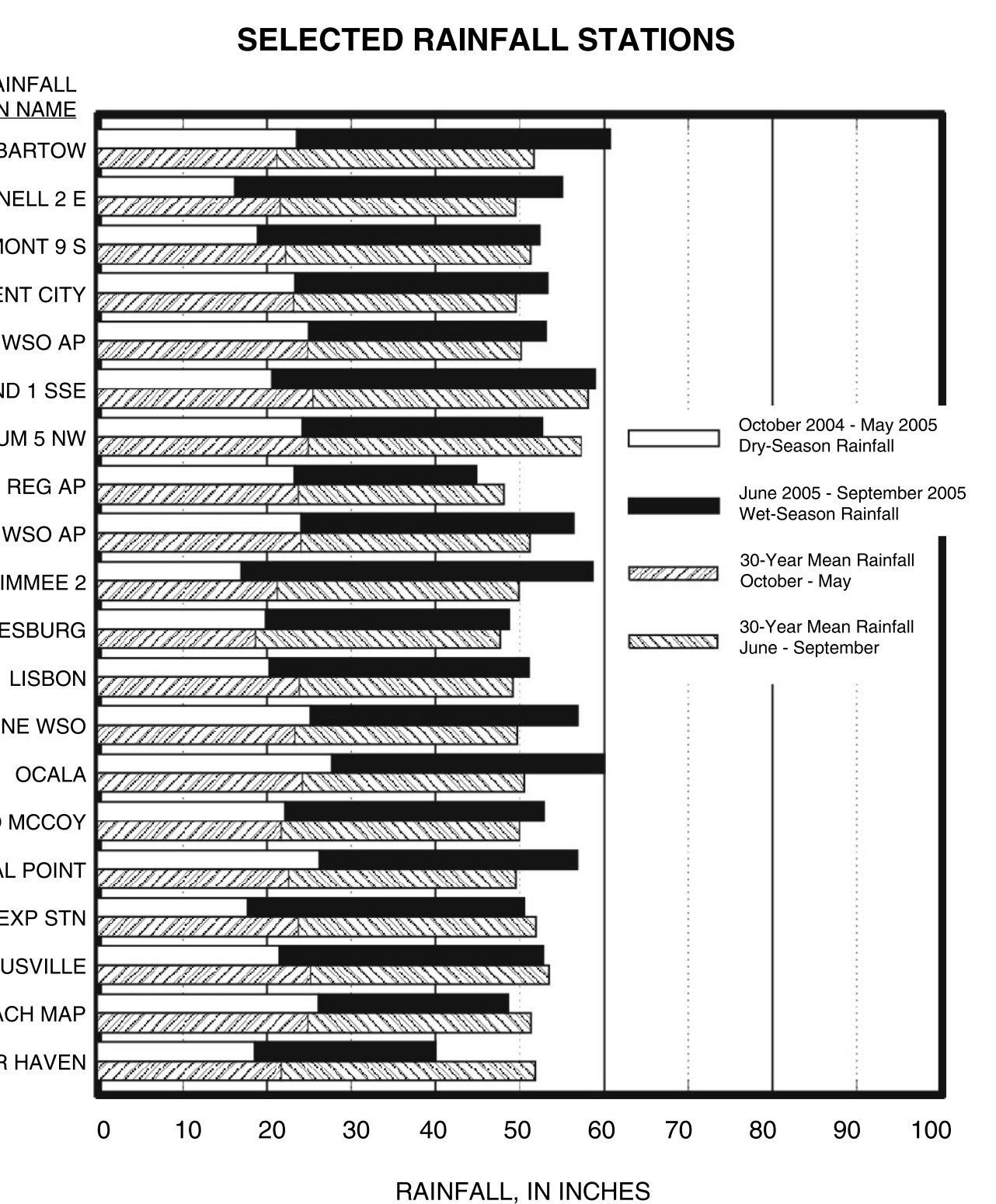


- EXPLANATION**
- 50 — POTENTIOMETRIC CONTOUR -- Shows altitude at which water level would have stood in tightly cased wells. Hatchures indicate depressions. Contour intervals 10 feet. Vertical datum is NGVD29. Dashed where inferred
 - STATE WATER MANAGEMENT DISTRICT BOUNDARY
 - SRWMD -- Suwannee River Water Management District
 - SFWMD -- South Florida Water Management District
 - SWFWMD -- Southwest Florida Water Management District
 - 37 SURVEYED WELL WITH KNOWN OPEN-HOLE INTERVAL -- Measuring-point datum is referenced to benchmark datum. Number is altitude of water level in feet above or below NGVD29
 - 31 SURVEYED WELL WITH UNKNOWN OPEN-HOLE INTERVAL -- Measuring-point datum is referenced to benchmark datum. Number is altitude of water level in feet above or below NGVD29
 - 46 UNSURVEYED WELL WITH KNOWN OPEN-HOLE INTERVAL -- Measuring-point datum is estimated from topographic map. Number is altitude of water level in feet above or below NGVD29
 - 32 UNSURVEYED WELL WITH UNKNOWN OPEN-HOLE INTERVAL -- Measuring-point datum is estimated from topographic map. Number is altitude of water level in feet above or below NGVD29
 - SPRING -- Line indicates direction of spring outflow
 - FLOWING BOREHOLE
 - 49 SINKHOLE -- Surface collapse feature exposing the Upper Floridan aquifer. Where measured, number is altitude of water level in feet above NGVD29
 - A RAINFALL STATION -- Letter is index to bar graph.

NOTE: The potentiometric contours are generalized on a regional scale to portray water levels in a dynamic hydrologic system taking due account of the variations in hydrogeologic conditions such as well-depth differences, non-simultaneous measurements of water levels, variable effects of pumping, and changing climatic influence. The potentiometric contours, thus, may not conform exactly with individual measurements of water level.



FIRST-MAGNITUDE SPRINGS

First-magnitude spring name	Spring-pool altitude, in feet above NGVD of 1929	Discharge, in cubic feet per second	Period-of-record mean-daily discharge, in cubic feet per second
Silver Springs	42	785*	776
Rainbow Springs	32	749*	698
Blue Springs (Volusia County)	3	183*	156
Silver Glen Springs	3	102*	108
Alexander Springs	11	105*	106

* These altitudes do not necessarily reflect the potentiometric surface at the spring pool.
* Mean-daily discharge for September 2005.
† Instantaneous discharge measured on September 19-30, 2005.

INTRODUCTION

This map depicts the potentiometric surface of the Upper Floridan aquifer in the St. Johns River Water Management District and vicinity for September 2005. Potentiometric contours are based on water-level measurements collected at 643 wells during the period September 12-28, near the end of the wet season. Some contours are inferred from previous potentiometric-surface maps with larger well networks. The potentiometric surface of the carbonate Upper Floridan aquifer responds mainly to rainfall, and more locally, to ground-water withdrawals and springflow. Potentiometric-surface highs generally correspond to topographic highs where the aquifer is recharged. Springs and areas of diffuse upward leakage naturally discharge water from the aquifer and are most prevalent along the St. Johns River. Areas of discharge are reflected by depressions in the potentiometric surface. Ground-water withdrawals locally have lowered the potentiometric surface. Ground water in the Upper Floridan aquifer generally flows from potentiometric highs to potentiometric lows in a direction perpendicular to the contours.

SUMMARY OF HYDROLOGIC CONDITIONS

Measured values of the potentiometric surface ranged from 3 feet below NGVD29 near Fernandina Beach, Florida, to 130 feet above NGVD29 in Polk County, Florida. The average water level of the network in September 2005 was about a foot higher than the average in May 2005 following near-average rainfall during the previous 12 months. Seasonal differences in network average water levels generally range from 4 to 6 feet. The below-average seasonal change in water levels is reflective of the above-average rainfall in 2004. For 585 wells with previous measurements, September 2005 levels ranged from about 11 feet below to about 10 feet above May 2005 water levels. For 585 wells with previous measurements, September 2005 levels ranged from about 10 feet below to about 11 feet above September 2004 water levels. The average water level of the network in September 2005 was about a foot lower than the average in September 2004.

ADDITIONAL REFERENCE

Long-term hydrographs of ground-water levels for continuous and periodic wells are available at internet site: <http://waterdata.usgs.gov/nwis/gw>