

In its broadest sense, environmental quality encompasses all the features of our surroundings. As used in this study, environmental quality relates to the purity of our air and water as it affects our health and our quality of life. These factors are vital not only to the well being of the natural environment itself, but also to the well being of Ventura County's residents. As such, they constitute a fundamental part of a balanced effort to establish and sustain a 3-E approach to the county's future.



Richard Slack

ANNUAL AVERAGE GROUNDWATER QUALITY - SANTA CLARA RIVER BASIN

WHAT IS THE MEASURE?

The measure is the level of chlorides (from seawater intrusion) in the Oxnard Plain groundwater basins, and the level of nitrates and total dissolved solids in the Oxnard Plain and in the Santa Clara River Valley.

WHY IS THE MEASURE IMPORTANT?

Groundwater provides almost half of California's drinking water. Keeping it clean and maintaining its quality is of major importance to all citizens. Ventura County's agricultural industry also depends on groundwater. Aquifers underlying the Oxnard Plain have been intruded over the past several decades by seawater. The Freeman Diversion facility near Santa Paula diverts Santa Clara River water into settling ponds to replenish the Plain's aquifers and prevent further seawater intrusion. Natural recharge under our county's rivers and streams is vital to maintaining the health of our aquifers.

HOW ARE WE DOING?

Ventura County's groundwater quality is generally good. In part, this is because the county does not have the same concentration of industrial facilities that have led to groundwater contamination in other Southern California counties. Chloride levels remain high, due, in some areas, to seawater intrusion. Chloride levels have been dramatically reduced at some test well sites. The level of Total Dissolved Solids, mainly from dissolution of underground minerals, tends to hover slightly above 1000 milligrams per liter, which is higher than desirable but not a health risk. Nitrate levels typically remain well below the drinking water standard of 45 mg/l.

See Chart on Page 26

AIR QUALITY

WHAT IS THE MEASURE?

The measure is the number of days in which Ventura County exceeded the federal and state limits on atmospheric ozone. If a daily ozone reading exceeds 0.09 parts per million, a state “violation day” occurs. If it exceeds 0.10 parts per million, a federal violation day occurs.

WHY IS THE MEASURE IMPORTANT?

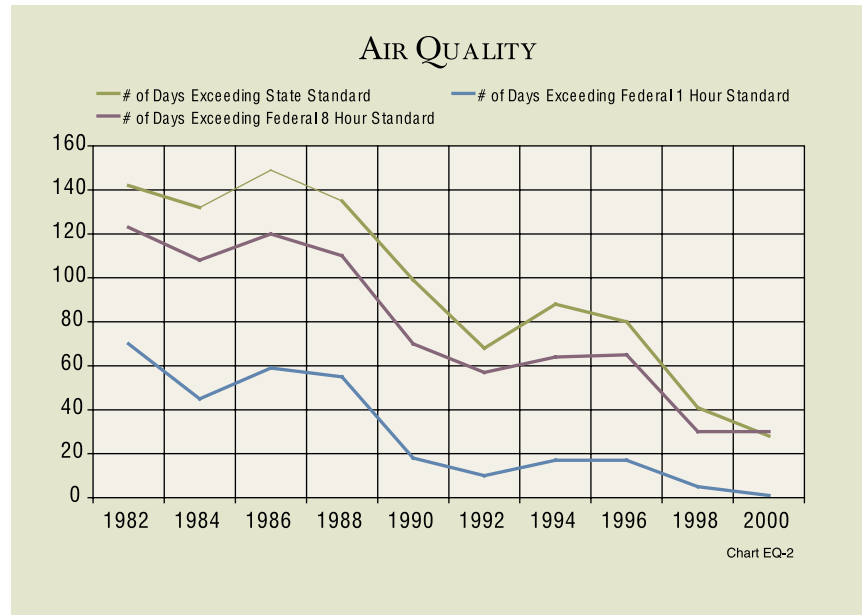
Both ozone and particulate levels are significant air quality issues.

We chose ozone as the indicator for two reasons. First, the county has not exceeded federal standards for particulates. Secondly, ozone is

the most pervasive pollutant, both in the frequency and severity of standard violations, and in the numbers of people affected. Nitrogen oxides and hydrocarbons reacting together in sunlight produce ground-level ozone, a colorless gas. In the upper atmosphere, ozone acts as an essential filter of harmful radiation. When humans are exposed to it in the lower atmosphere, an array of symptoms, including eye and throat irritation, coughing, chest tightness, and headache, can result. The more severe effects can restrict normal activities. Ozone can also reduce lung capacity, especially in children.

HOW ARE WE DOING?

The data show a steadily improving trend in Ventura County air quality. The number of days the county exceeded the federal one-hour standard for ozone has dropped from 70 in 1982 to 2 in 1999, 1 in 2000, and 2 in 2001. However, Ventura County still ranks as one of the smoggiest areas in the nation, and still has a challenge ahead in achieving good air quality in all parts of the county. The EPA has given Ventura County until 2005 to comply with the one-hour federal standard for ozone. To comply with this standard, the one-hour limit must not be exceeded more than three times over three consecutive years. The county seems to be on a reasonable path to meet the deadline.



OCEAN WATER QUALITY (BEACH CLOSURES)

WHAT IS THE MEASURE?

The measure is the percent of annual closures of Ventura County beaches due to contaminated water. Beach closures occur whenever the level of total coliform bacteria exceeds 10,000 per 100 milliliters, fecal coliform exceed 400 per 100 milliliters, or enterococcus bacteria exceed 104 per 100 milliliters.

WHY IS THE MEASURE IMPORTANT?

During rainfall, runoff from streets, sewers, and other places can enter rivers and streams and be transported to the ocean. Areas near stream outflow points can become contaminated with a mix of bacteria and viruses. Beach areas that have poor circulation are particularly susceptible to high levels of these microorganisms, and the levels may remain high for longer periods. Surfers and swimmers using contaminated beaches have been known to become ill and develop rashes. Clean beaches are also a major factor in Ventura County’s economy due to the revenue flowing to its coastal cities from beach visitors.

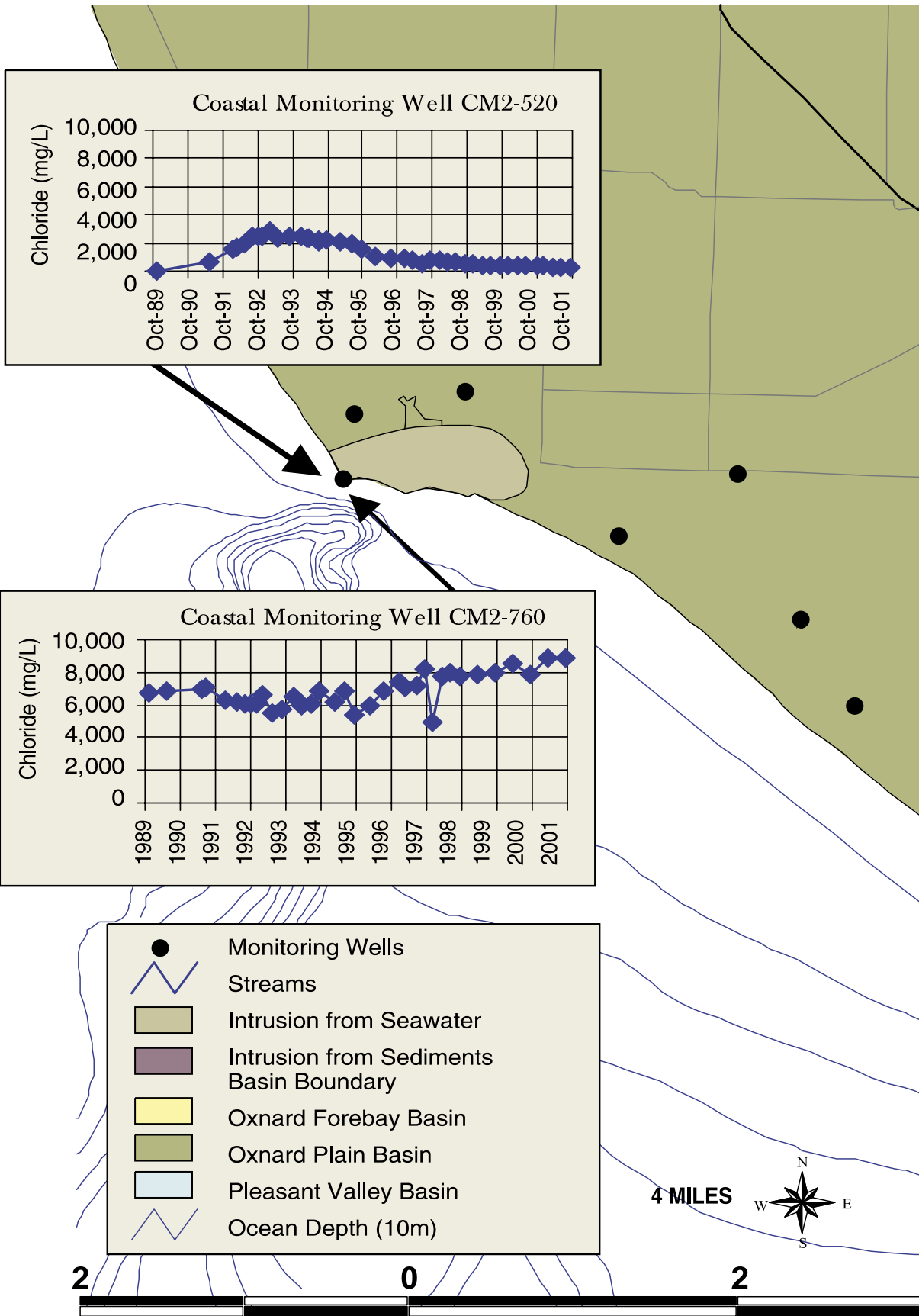
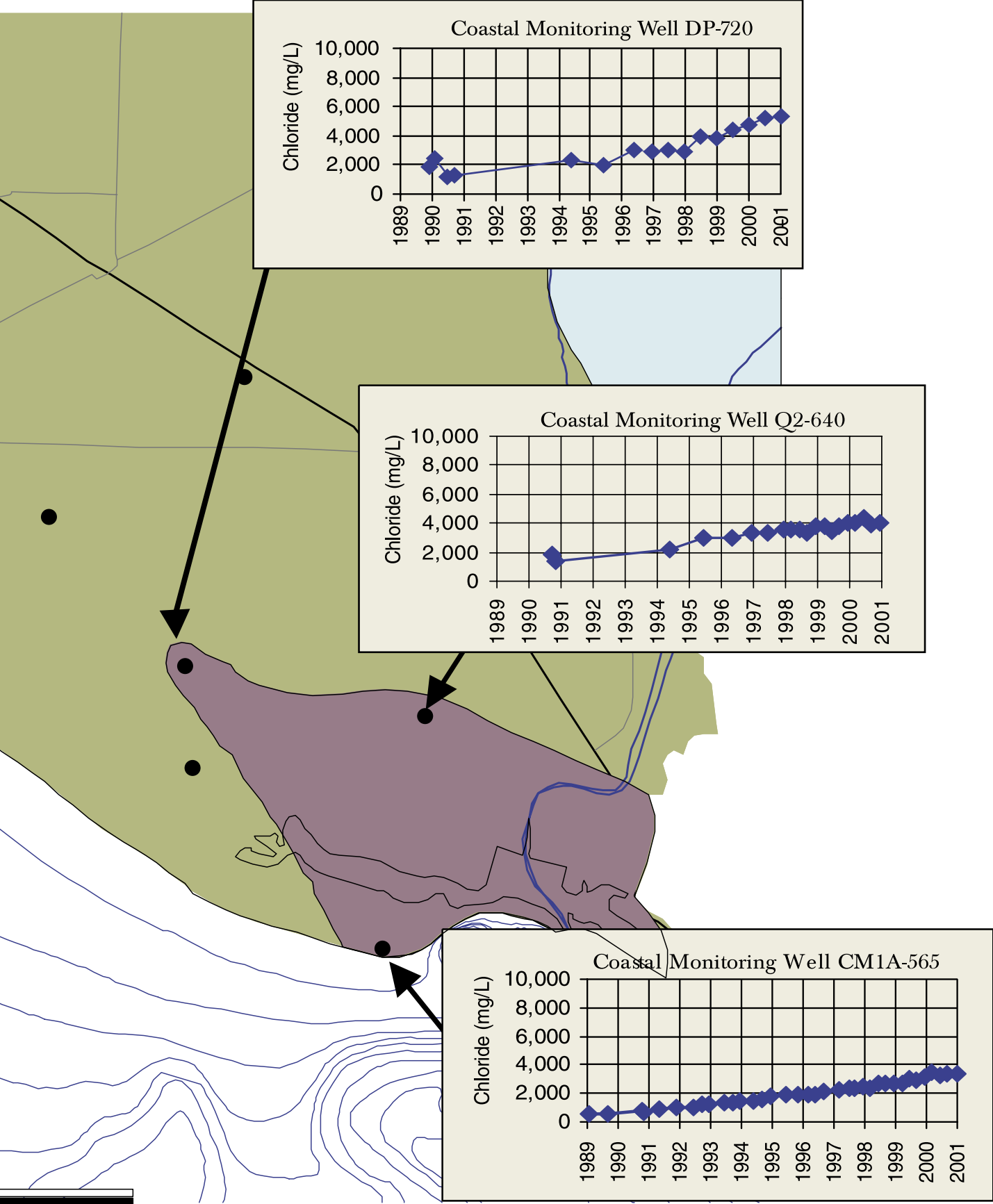


Chart EQ-1



HOW ARE WE DOING?

Data for the year 2001 show that with the exception of some areas, including the well-known Kiddie Beach at Channel Islands Harbor, Ventura County's beaches are some of the cleanest in the state. This fortuitous result is partially due to the fact that 2001 was a year of low rainfall. Beach closures generally are fewer in low rainfall years due to fewer contaminants being delivered to the ocean via coastal streams, which can be contaminated by sewers during rainstorms.

BEACH CLOSURES 2001

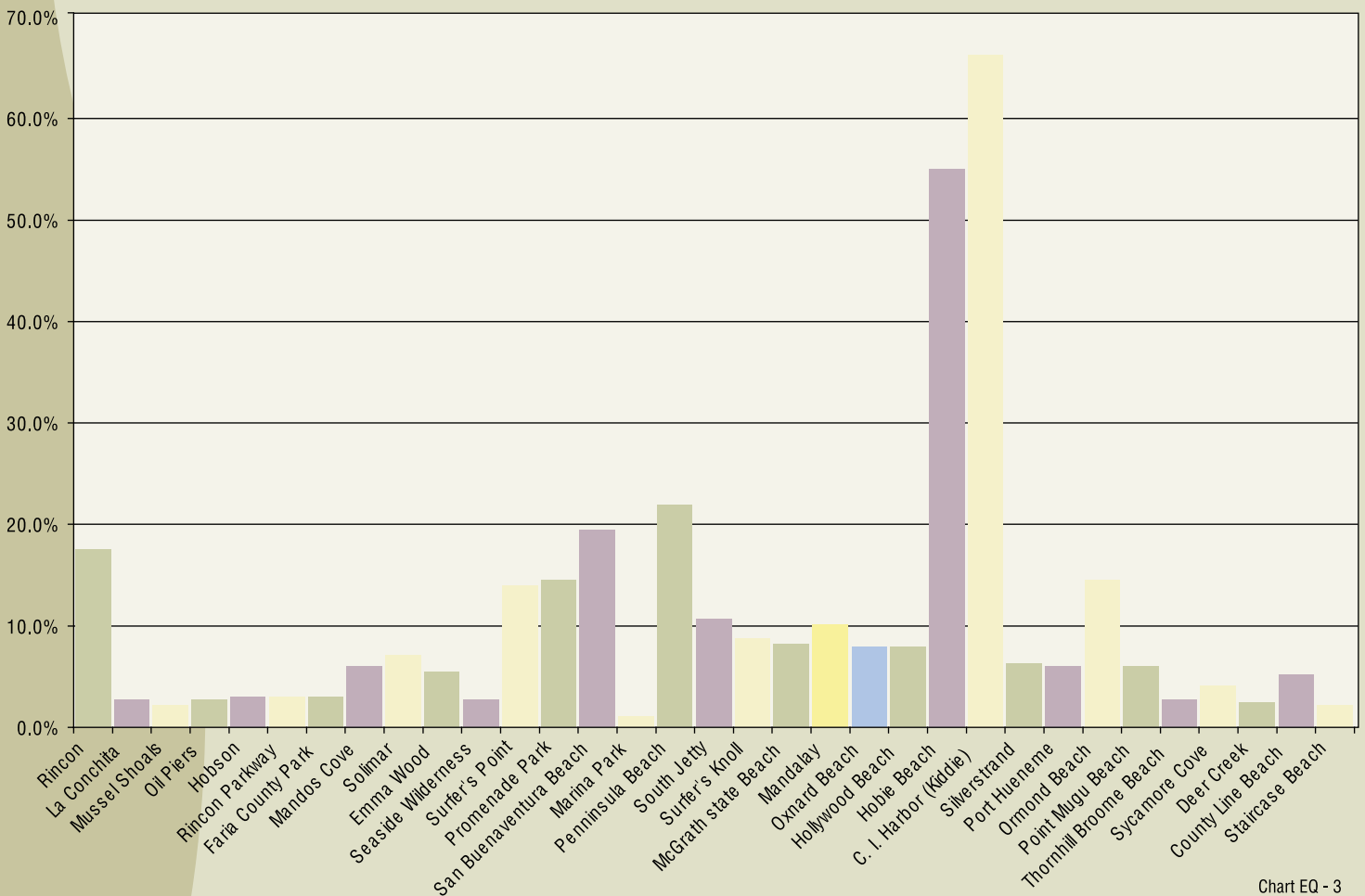


Chart EQ - 3