



## Chronologic of the Salton Sea

Author: Sumaya Troy Alaama  
Center for Health Disparities Research  
University of California, Riverside

### Abstract

The Salton Sea, California's largest inland body of water, has a complex history rooted in natural processes and human activities. Originating from the ancient Lake Cahuilla, the lake today is due to accidental flooding from the Colorado River. Without a consistent water source after the Colorado River was redirected, the Salton Sea faces the same fate as its predecessor, Lake Cahuilla. Human interventions, such as agricultural runoff, have temporarily sustained the Salton Sea, but limited rainfall, rising temperatures, and high evaporation rates threaten its existence.

### Introduction

The Salton Sea is a large, shallow, terminal, saltwater lake located in the Imperial and Coachella Valleys of South-eastern California. Millions of years ago, the Gulf of Mexico extended up into this region (past present-day Indio) and the Colorado River waters flowed into the ancient gulf (near present-day Yuma). Over time, the gulf was split into two portions. This occurred because in addition to water, the river carried millions of tons of sand, rocks, minerals, and plant material. Therefore, as the Colorado river flowed into the Gulf, it gradually created a natural dam of sediment that cut off the northern portion from the rest of the Gulf of Mexico. As the river continued to flow into the Southern portion, the Northern portion was left to slowly dry

out. This left behind a dry natural basin situated well below sea level that is now known as the Salton Trough.

Periodically, floodwaters from the Colorado River would flow into the Salton Trough and collect in its geographically lowest point (the Salton Sink). The floodwaters inevitably stopped, and the lake dried out. This phenomenon of gradually filling and drying of the Salton Trough was well known by the Native Americans (the Cahuilla people) that lived in the region for thousands of years. Therefore, the most notable lake that formed and dried in the Salton Trough was named after them; Lake Cahuilla.



## The Salton Sea's Predecessor: Lake Cahuilla

The ancient Lake Cahuilla was approximately 6 times larger than the modern Salton Sea. With no naturally occurring inlet, or outlet, when the floodwaters subsided, Lake Cahuilla's water level gradually decreased due to evaporation. This cycle of refilling and slow drying of Lake Cahuilla repeated several times until the last major flooding event occurred in the late 1500s. Eventually, Lake Cahuilla completely dried out. Since then, minor floods have taken place and small bodies of water have formed in the low Salton Sink. However, due to human development of dams and dikes along the Colorado River, natural flooding events stopped occurring.

The soil surrounding the Salton Sea is

very rich and has the potential to sustain lucrative agricultural fields. Due to this, the California Development Company aimed to divert water from the Colorado River into the Imperial Valley. However, poor engineering and lack of oversight resulted in uncontrolled flow of the raging Colorado River waters into the Salton Sink in 1905. For two years, much of the river dumped into the basin with very little water continuing to the Gulf of Mexico. The massive influx of water into the region created a large inland lake that is now referred to as the Salton Sea. Yet, without the Colorado River to sustain it, this terminal body of water will inevitably face the same fate as its ancient predecessor, Lake Cahuilla.

## The Salton Sea Today

When the Colorado River waters were successfully diverted back to the Gulf of Mexico, the Salton Sea was left without a consistent source of new water. Limited rainfall, rising temperatures, and high rates of evaporation are gradually depleting the water currently sitting in the Salton Sink. Without floodwaters to maintain water levels, it is likely that the Salton Sea would have disappeared many years ago. However, nearby agricultural fields have

been dumping water into the lake which has moderately slowed the inevitable demise of the Salton Sea and maintained its existence; for now. This agricultural runoff waste, and the overall decreased volume of water, have changed the Salton Sea and the area around it rapidly and drastically. Today, the Lake has become a hot topic of discussion regarding various environmental and health concerns.

### Disclaimer

Information contained here including but not limited to, text, graphics, images, and other material was gathered from public scientific sources and created internally and is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your qualified healthcare provider regarding a medical condition or treatment and never disregard professional medical advice or delay in seeking it because of something you have read on this website.