

A wide-angle landscape photograph showing rolling hills covered in a dense field of wildflowers. The flowers are primarily yellow and orange, with some red and green patches. The hills are under a clear, light blue sky. In the distance, a range of mountains is visible. The overall scene is a natural, open landscape.

# Early 20<sup>th</sup> Century History of the Poppy Reserve Area



Old Tuff Quarry



View of Fairmont Butte looking north from the North Poppy Loop trail at the Antelope Valley California Poppy Reserve.

# Quarry

- “Tufa Mill”
- Mined “tuff”
- Used to build the Owens Valley or Los Angeles Aqueduct

# Los Angeles (Owens Valley) Aqueduct

- The Los Angeles Aqueduct system comprising the Los Angeles Aqueduct (Owens Valley aqueduct) and the Second Los Angeles Aqueduct, is a water conveyance system operated by the LA DWP
- Designed by engineer and LADWP director, [William Mulholland](#), the system delivers water from the [Owens River](#) in the Eastern Sierra Nevada Mountains to [Los Angeles, California](#).
- The project began in 1908 with a budget of \$24.5 million. With 5,000 workers employed for its construction, the Los Angeles Aqueduct was completed in 1913.
- The catastrophic failure of the St. Francis Dam, in 1928, flooded the Santa Clarita Valley and parts of Ventura County (resulting in public disgrace for the city of Los Angeles and the end of Mulholland's career).

# The Fairmont "Tufa" Mill

- **Builders of the Los Angeles (or Owens Valley) Aqueduct** mined tuff from a quarry on Fairmont Butte and may have used it as a concrete additive.
- Tuff (from the Italian tufo) is a type of rock consisting of consolidated volcanic ash ejected from vents during an volcanic eruption.
- Tuff is sometimes called tufa, particularly when used as construction material, although tufa also refers to a quite different rock.
- Tuff is common in Italy, and the Romans used it for many buildings and bridges. Tuff from Rano Raraku was used by the Rapa Nui people of Easter Island to make the vast majority of their famous moai statues.





# “Tufa Mill” 1909





# Quarry 1912







TUFA QUARRY AT FAIRMONT

# Elizabeth Tunnel

- In 1907 William Mulholland, superintendent of the Los Angeles Department of Water and Power, started work on the Elizabeth Lake (?) Tunnel for transporting water in the Los Angeles Aqueduct from Owens Valley to Los Angeles.
- The water traveled across Western Antelope Valley running south, west of what is now the Poppy Reserve, approximately in the area called Neenach. (The additional aqueduct build in the 1970s is much closer to the western border of the Reserve)
- Less than a half a mile east of Lake Hughes, the five-mile (8 km)-long tunnel is 285 feet (87 m) under the ridge and valley formed by the San Andreas Fault.
- The tunnel was driven from both ends. The north portal is at Fairmont Reservoir and the south in Bear Canyon (now Portal Canyon) near Green Valley.

# Elizabeth Tunnel

- The Elizabeth Lake tunnel was the largest single construction project on the Los Angeles Aqueduct and set speed records in its day.
- Considered one of the engineering marvels of the world when constructed
- Note: Does not go under Elizabeth Lake –It probably is under “Munz Lake” east of Lake Hughes.
- Portal Ridge may get its name due to the fact that its north facing slope is the location of the "North Portal" of the Elizabeth Lake Tunnel.
- At least one map from 1980 calls it Portac Ridge



# Engineering Car at South Portal of Elizabeth Lake Tunnel 1912



# South Portal of Elizabeth Lake Tunnel 1908



# Where does the water go?

- From 1926 until 1928, it flowed south out of the tunnel into the St. Francis Dam in San Francisquito Canyon.





# Saint Francis Dam



Photo: May 1926  
colorized photo taken  
the day of the  
dedication of the dam.

It was designed to hold  
one year's water supply  
for the City of Los  
Angeles



On the night of March 12, 1928, the dam collapsed

Photo: One day after the Failure




- **A flood wave 140 ft deep swept down the canyon**
- **At least 420 were killed; of which 179 bodies were never recovered. Actual death toll likely much higher.**
- Worst American civil engineering failure of the 20th Century



# William Mullholland



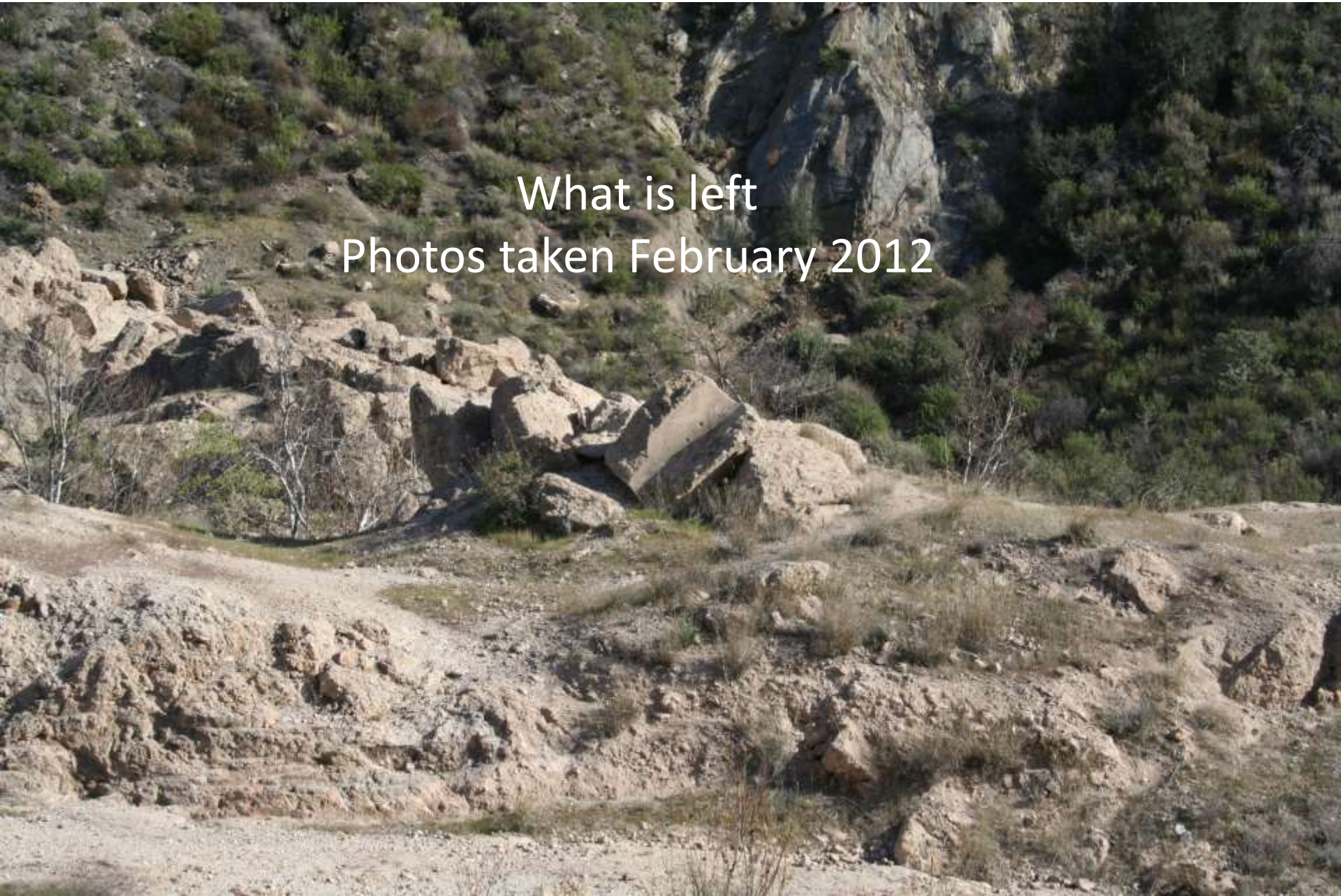
**“Don’t blame anyone else, you just fasten it on me. If there was an error in human judgment, I was the human”.**



What is left  
Photos taken February 2012



What is left  
Photos taken February 2012



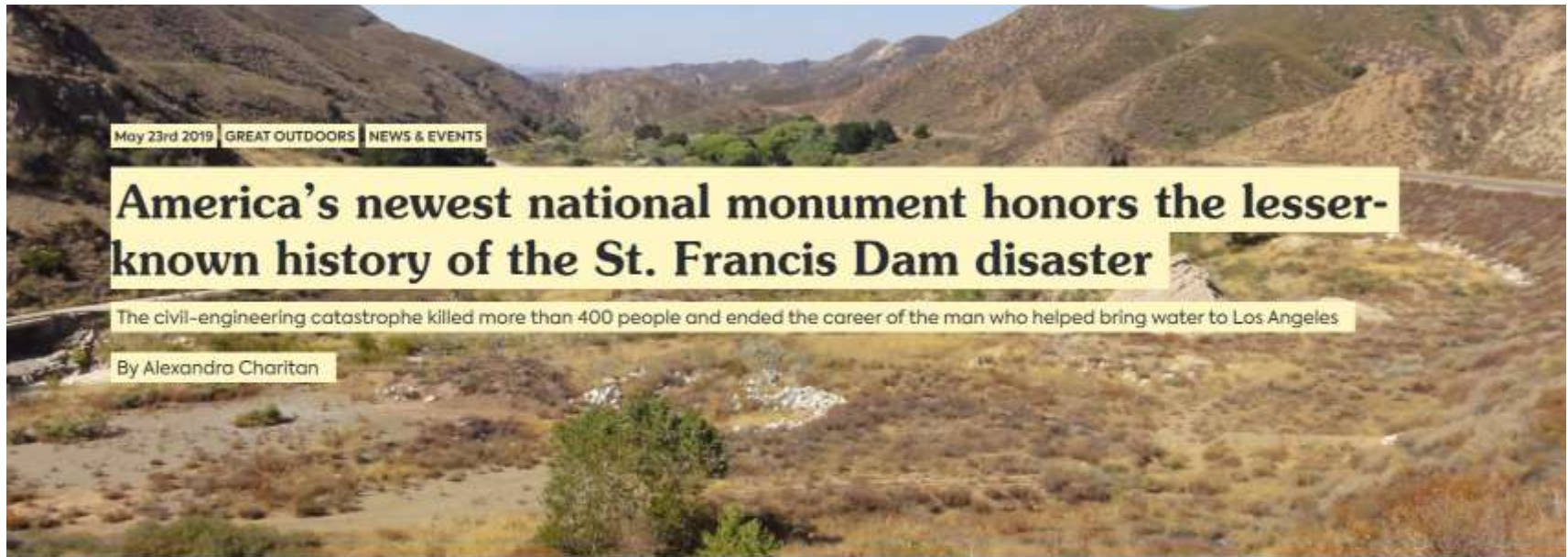


What is left  
Photos taken February 2012





St. Francis Dam National Memorial and Monument  
On March 12, 2019—the disaster’s 91st anniversary—  
the [St. Francis Dam site](#) became one of four new U.S.  
national monuments.



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**T**he San Francisco earthquake of 1906 gets all the attention when it comes to California catastrophes. The massive earthquake, which killed more than 3,000 people, often overshadows the state's second-greatest loss of life, which came as a result of one of the worst





# Conclusion: Many Stories to Tell:

Foremost: Victims, survivors and heroes

But hopefully also included in the story of:

- Construction of the Aqueduct
- Owen's Valley
- Current efforts to re-water the Owen's River and portions of Owen's Lake



Remarkable Archive of information available  
through the Santa Clarita Valley Historical  
Society website:

<https://scvhistory.com/scvhistory/stfrancis.htm>