GLOBAL WEATHER AND CLIMATE CONSULTING, LLC

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EXPERT WITNESS REPORT OF TODD MORRIS
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Historical Newport Beach CA Rainfall
May 2015 - Nov 2019

Jul 27, 2024

Prepared for: Jay Goldenberg
127 25th Street
Newport Beach CA 92663

Introduction

My Curriculum Vitae is attached hereto as Appendix A for the use of the reader and includes my publications over the past 30 years as well as a list of cases in which I have testified at trial or at deposition over the past 10 years.

Assignment

I was tasked with reviewing the weather and rainfall records for the area of Newport Beach, CA, specifically evaluating the rainfall that occurred between 7 May 2015 and 19 Nov 2019. The specific location of interest is 127 25th Street Newport Beach CA 92662.

Methodology

I began by collecting and evaluating pertinent weather records for the period of time of interest and for the given subject location. These records included:

- National Weather Service (NWS) certifiable Storm Data (including local storm reports) for May 2015 through Nov 2019
- NWS certifiable Climatological Data (CD) publications for May 2015 through Nov 2019
- NWS certifiable WSR-88D Weather Radar data (base reflectivity) for rainfall events occurring between May 2015 through Nov 2019
- NWS certified surface weather observations for the Newport Beach Harbor District, the official observation site for Newport Beach CA
- NWS certifiable surface weather observations for all other official climate stations within a 10-mile radius of the location of interest

I examined related archived photos/video from network media as well as archived postings on social media such as Facebook and Twitter.

Background

The following list of weather observations were identified, and their data analyzed:

Newport Beach CA Metadata								
ID	Station Name	Type	Lat	Lon	Elev	Dist	Min Freq	Data Date
Location of Interest			33.6112	-117.9298	31			
NBHC	Newport Beach Harbor COOP	COOP	33.6031	-117.8836	27	2.7E	Daily	1/1/1921
KSNA	John Wayne Airport	ASOS	33.6798	-117.8674	39	5.9NE	5 Min	6/7/1940
SNA FS	Santa Ana Fire Station	COOP	33.7442	-117.8667	111	9.9N	Daily	1/1/1915

Fig. 1 – Weather Observation Metadata

Figure 1 shows that weather observations from as close to the location of interest as 2.7 miles away to as far as 9.9 miles away were considered. For the benefit of the reader, a legend for the above information can be found in Figure 2 below.

NOTES
Type = Type of Station/Owner
ASOS = Automated Surface Observing System (NWS)
COOP = NWS Cooperative Weather Observer
Lat = Latitude (decimal degrees)
Lon = Longitude (decimal degrees)
Elev = Ground Station Height Above MSL
Dist = Distance in Statute Miles (including direction)
Min Freq = Minimum Frequency of Observations
Data Date = Date Station Began Taking Observations

Fig. 2 – Legend for Data Found in Figure 1 Above

Also, for the benefit of the reader, a map of the above weather stations can be found in Figure 3 below.

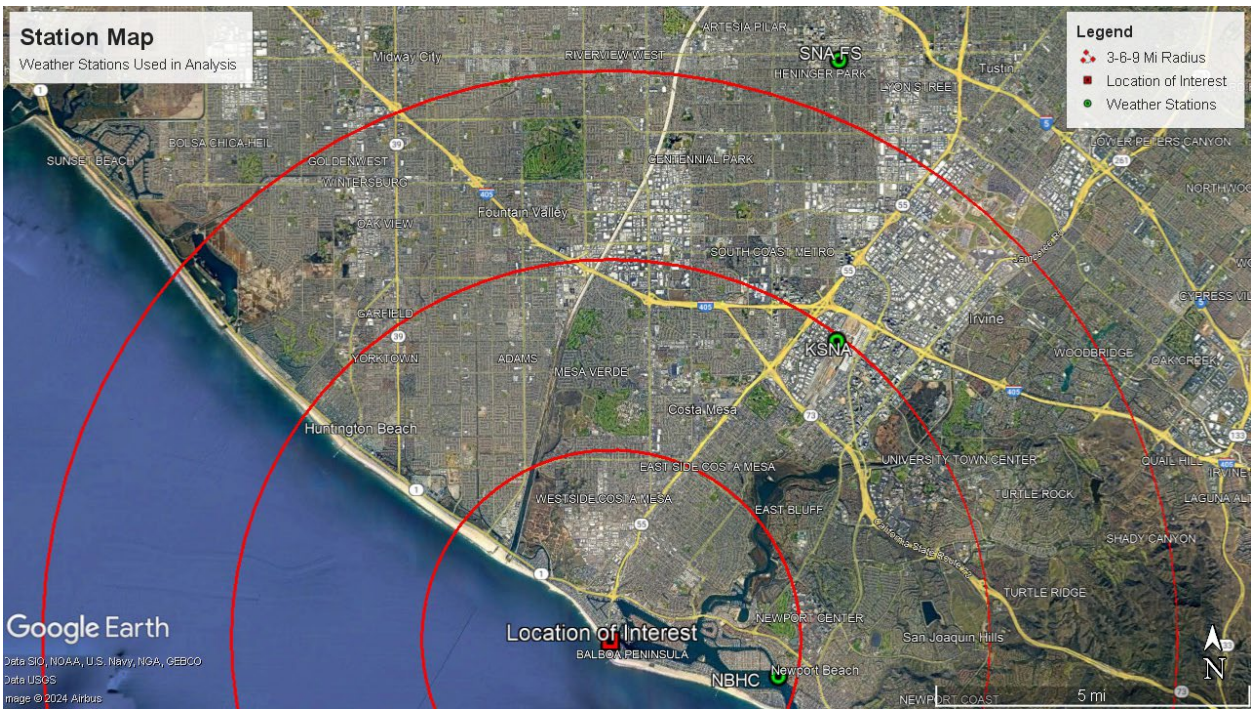
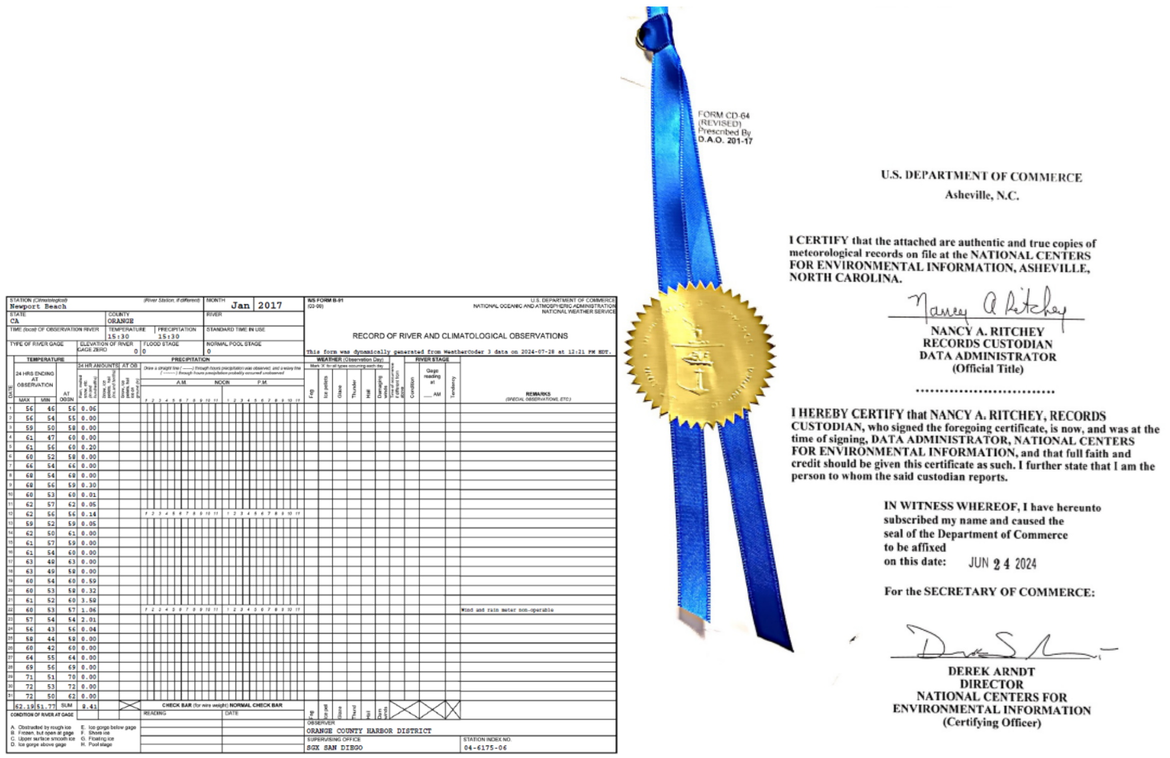


Fig. 3 – Map of Weather Observation Found in Metadata

Analysis

All of the weather stations listed in Figure 1 had complete and reliable records for the period of time examined. The Newport Beach Harbor District COOP data was chosen for this analysis since it was the closest weather station to the location of interest and is the official rainfall record for the city of Newport Beach, CA, dating back to 1921.
Official U.S. Department of Commerce CERTIFIED rainfall records for this location were retrieved from the National Centers for Environmental Information for the months of Jan 2017, Dec 2018, and Feb 2019[1]. See example in Figure 4 below.



STATION (Climatological): Newport Beach
MONTH: Jan 2017
STATE: CA
COUNTY: ORANGE
TIME (local) OF OBSERVATION: TEMPERATURE 15:30; PRECIPITATION 15:30
ELEVATION OF RIVER GAGE ZERO: 0
FLOOD STAGE: 0
NORMAL POOL STAGE: 0

WS FORM B-91 (03-08)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

RECORD OF RIVER AND CLIMATOLOGICAL OBSERVATIONS

This form was dynamically generated from WeatherCoder 3 data on 2024-07-28 at 12:21 PM EDT.

DATE	MAX	MIN	AT OBSN	Rain, melted snow, etc. (in. and hundredths)	REMARKS
1	56	46	56	0.06	
2	56	54	55	0.00	
3	59	50	58	0.00	
4	61	47	60	0.00	
5	61	56	60	0.20	
6	60	52	58	0.00	
7	66	54	66	0.00	
8	68	54	68	0.00	
9	68	56	59	0.30	
10	60	53	60	0.01	
11	62	57	62	0.05	
12	62	56	56	0.14	
13	59	52	59	0.05	
14	62	50	61	0.00	
15	61	57	59	0.00	
16	61	54	60	0.00	
17	63	48	63	0.00	
18	63	49	58	0.00	
19	60	54	60	0.59	
20	60	53	58	0.32	
21	61	52	60	3.58	
22	60	53	57	1.06	Wind and rain meter non-operable
23	57	54	54	2.01	
24	56	43	56	0.04	
25	58	44	58	0.00	
26	60	42	60	0.00	
27	64	55	64	0.00	
28	69	56	69	0.00	
29	71	51	70	0.00	
30	72	53	72	0.00	
31	72	50	62	0.00	
	62.19	51.77	SUM	8.41	

CONDITION OF RIVER AT GAGE
A. Obstructed by rough ice; B. Frozen, but open at gage; C. Upper surface smooth ice; D. Ice gorge above gage; E. Ice gorge below gage; F. Shore ice; G. Floating ice; H. Pool stage

OBSERVER: ORANGE COUNTY HARBOR DISTRICT
SUPERVISING OFFICE: SGX SAN DIEGO
STATION INDEX NO.: 04-6175-06

FORM CD-64 (REVISED) Prescribed By D.A.O. 201-17

U.S. DEPARTMENT OF COMMERCE
Asheville, N.C.

I CERTIFY that the attached are authentic and true copies of meteorological records on file at the NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION, ASHEVILLE, NORTH CAROLINA.

NANCY A. RITCHEY
RECORDS CUSTODIAN
DATA ADMINISTRATOR
(Official Title)

I HEREBY CERTIFY that NANCY A. RITCHEY, RECORDS CUSTODIAN, who signed the foregoing certificate, is now, and was at the time of signing, DATA ADMINISTRATOR, NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION, and that full faith and credit should be given this certificate as such. I further state that I am the person to whom the said custodian reports.

IN WITNESS WHEREOF, I have hereunto subscribed my name and caused the seal of the Department of Commerce to be affixed on this date: JUN 24 2024

For the SECRETARY OF COMMERCE:

DEREK ARNDT
DIRECTOR
NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION
(Certifying Officer)

Fig. 4 – Certified Jan 2017 Observation Data and Associated Certificate of Authenticity

[1] https://www.ncdc.noaa.gov/IPS/coop/coop.html

Unofficial rainfall records for the entire period May 2015-Nov 2019 were also examined. Collectively, these records show that:

Month	Total Precipitation Normal (inches)
January	2.20
February	2.38
March	1.34
April	0.55
May	0.18
June	0.07
July	0.02
August	0.00
September	0.10
October	0.33
November	0.64
December	1.62
Annual	9.43

Fig. 5 – Normal Monthly Rainfall at Newport Beach Harbor

Based upon these rainfall normals in Figure 5 and examination of the daily rainfall data from May 2015 through Nov 2019, the following statistics are realized:

1. During the above-mentioned 4.5-year period, there were 3 distinct wet periods.
   - Sep-Oct 2015 - 1.87" (434% of normal)
   - Dec 2016-Feb 2017 - 14.42" (232% of normal)
   - Dec 2018-Feb 2019 - 9.96" (161% of normal)

2. During the above-mentioned 4.5-year period, there were 8 distinct wet months.
   - May 2015 - 750% of normal
   - Sep 2016 - 1030% of normal
   - Dec 2016 - 174% of normal
   - Jan 2017 - 382% of normal
   - Feb 2017 - 134% of normal
   - Dec 2018 - 172% of normal
   - Jan 2019 - 160% of normal
   - Feb 2019 - 154% of normal

3. During the above mentioned 4.5-year period, the top 3 wettest days were:
- 21 Jan 2017 - 3.58"
- 06 Dec 2018 - 2.40"
- 14 Feb 2019 - 2.22"

4. During the above mentioned 4.5-year period, the top 5 wettest 3-day periods were:
- 21-23 Jan 2017 - 6.65"
- 20-22 Jan 2017 - 4.96"
- 19-21 Jan 2017 - 4.49"
- 22-24 Jan 2017 - 3.11"
- 5-7 Dec 2018 - 2.69"

All of the above has been verified and CERTIFIED by the National Centers for Environmental Information and are available upon request.

Certification

I certify that the above information contained in this report is true and accurate to the best of my ability and that all analysis and findings expressed in this report were made with accuracy as a professional meteorologist within a reasonable degree of meteorological certainty. My curriculum vitae is attached to this report as Appendix A.

Todd Morris

Todd Morris, CCM
Global Weather and Climate Consulting, LLC