

# **Rainfall Event Report**

## **August 27, 2007**

prepared by  
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A locally intense thunderstorm moved through the Las Vegas Valley in the early morning hours of August 27, 2007 accompanied by an intense lightning display. While most of the Valley received some rain, the greatest rainfall depths were recorded in the southwest area. A total of nine (9) RFCD Flood Threat Recognition System (FTRS) rain gages reported rain depths in excess of one inch during this event, with the most rain reported in the vicinity of the Lakes Detention Basin (Desert Breeze Park). In addition to localized flooding in some areas, there were numerous reports of swift water rescues as well as fires caused by lightning strikes.

Rainfall began in the Las Vegas Valley before 2:30AM and quickly intensified, prompting the local office of the National Weather Service to issue a Flash Flood Warning shortly after 3:00AM. The NWS warning message at that time included mention of a swift water rescue in the vicinity of Boulder Highway and Flamingo Road. The KVBC-TV web-site reported that approximately two dozen swift water rescues occurred during this event.

The most significant rainfall was measured by the FTRS rain gage located at the Lakes Detention Basin near Durango Drive and Desert Inn Road where a total of 3.11" was recorded. Another FTRS rain gage (The Lakes) in the same area recorded 1.89". The total rainfall measured by the rain gage at the Lakes Detention Basin is likely to include up to 0.20" of sprinkler catch from the park's irrigation system in addition to the rainfall measured during the storm. However, it is apparent that when the rainfall data for this event is compared to data collected on preceding days, the irrigation system was active before the rainfall began. Therefore the rainfall depths and intensities recorded between 3:00AM and 5:00AM should accurately reflect the actual storm. This includes a measurement of 2.00" in a 30-minute period and 2.67" in 1 hour. These intensities rank among the highest intensities ever recorded by the District and exceed the design storm intensities used throughout Clark County.

Because of the amount and intensity of the rainfall measured at The Lakes and the Lakes Detention Basin, RFCD staff removed those rain gages the following day to verify the accuracy of the measurements. It was determined that the Lakes Detention Basin gage (4359) was within the manufacture's calibration specifications, but that The Lakes gage (4354) was slightly out of calibration specifications and is likely to have over-reported rainfall depths by 4%. District staff also checked the accuracy of the rain gage located on the Flamingo Wash at Spencer (4574) and determined that it accurately measured the rainfall.

Peak flow values reported at FTRS stations in the Flamingo Wash were approximately 1000 cfs, and the peak flow recorded in the Las Vegas Wash at Pabco Road was 2700 cfs. The

table below presents information on the runoff captured at detention basins during this event. All values are approximate.

<u>Location</u>	<u>Maximum Depth (ft)</u>	<u>Volume (ac-ft)</u>
Lakes Detention Basin	12.3	65
Desert Inn DB	7.9	25
Upper Flamingo	7.3	140
Oakey DB	12.1	40
Tropicana DB	13.6	40

The Red Cross reported responding to twelve reports of flooded homes as a result of this event. The most significant flooding appears to have occurred to homes in the vicinity of Desert Inn Road and Cimarron where at least four home owners reported flooding.

There were no reports of deaths or injuries as a result of this event. All regional flood control facilities appear to have functioned as designed. There were unofficial reports of trash and debris clogging storm drain inlets and restricting the system's ability to capture storm flow from the streets.

Attached to this report are a summary of the rainfall depths measured as well as post-event photos of The Lakes Detention Basin.

**Rainfall Summary**  
**August 27, 2007**

Stn ID	4409	4424	4334	4339	4354	4359	4244	4574	4059
08/27/07									
0600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0545	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0530	0.00	0.04	0.00	0.00	0.04	0.00	0.00	0.00	0.00
0515	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.04
0500	0.00	0.00	0.00	0.00	0.00	0.08	0.12	0.00	0.04
0445	0.04	0.08	0.00	0.12	0.16	0.08	0.08	0.00	0.12
0430	0.47	0.31	0.08	0.28	0.12	0.39	0.20	0.00	0.00
0415	0.04	0.00	0.04	0.24	0.51	0.98	0.51	0.00	0.00
0400	0.55	0.43	0.39	0.51	0.83	1.02	0.12	0.00	0.04
0345	0.08	0.04	0.12	0.24	0.16	0.28	0.08	0.00	0.00
0330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.04
0315	0.00	0.00	0.00	0.00	0.08	0.04	0.04	0.51	0.24
0300	0.08	0.08	0.00	0.12	0.00	0.04	0.00	0.24	0.63
0245	0.16	0.12	0.28	0.04	0.00	0.00	0.04	0.12	0.00
0230	0.00	0.00	0.12	0.00	0.00	0.08	0.00	0.08	0.00
0215	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
0200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0145	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
0130	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
0115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0045	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0030	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTALS</b>	1.42	1.10	1.02	1.54	1.89	3.11	1.22	1.34	1.14

All rainfall values are inches for the 15 minute period ending at the time indicated

**4409** – F-2 Detention Basin (0.8 miles southwest of Russell/Hualapai)

**4424** – F-1 Channel (0.25 mile northeast of Russell/Hualapai)

**4334** – Upper Flamingo 1 (0.50 miles southwest of Maule/Hualapai)

**4339** – Beltway Channel at Peace Way (0.10 miles southeast of Peace/Fort Apache)

**4354** – The Lakes (0.40 miles southwest of Spring Mountain/Durango)

**4359** – Lakes Detention Basin (Desert Breeze Park)

**4244** – Rainbow/Oakey

**4574** – Flamingo Wash at Spencer

**4059** – Gowan Outfall Channel (Camino al Norte 0.30 miles north of Craig)





**Figure 1.** Debris line at The Lakes Detention Basin indicating high water level of approximately 12.3 feet.



**Figure 2.** Grates covering inlet structure at northwest corner of The Lakes Detention Basin dislodged by flow entering the basin.