



Dust storm moving into Phoenix Sky Harbor International Airport on August 25th. The associated outflow boundary resulted in a brief period of heavy rainfall across portions of the Phoenix Metropolitan area during the late afternoon. Photo courtesy of Mike Olbinski.

Flood Control District of Maricopa County

Flood Warning Branch, Engineering Division

MSP Verification Report & Season Recap: Monsoon Season 2025



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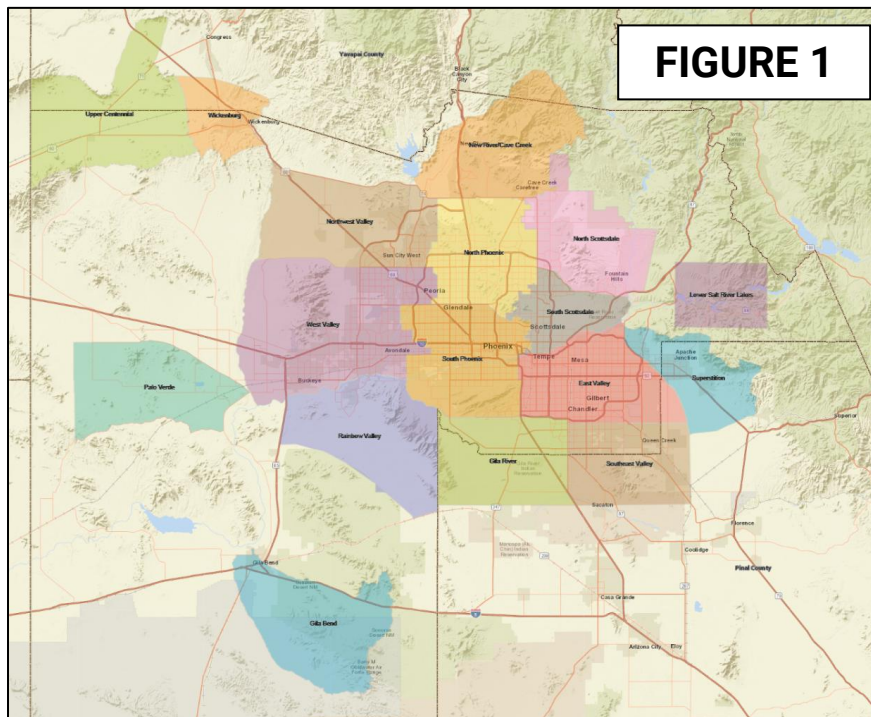
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INTRODUCTION

This report was generated by the Flood Warning Branch of the Flood Control District of Maricopa County (FCDMC). It covers the length of the monsoon season as defined by the National Weather Service Phoenix WFO: June 15th- September 30th. This report includes daily records on Weather Outlooks and Statements issued by the Meteorological Services Program (MSP) as well as a complete verification and summary of these products.

The Flood Warning Branch of the FCDMC operates a year-round MSP that’s purpose is to provide detailed meteorological forecasts and support to county, city, and other local agencies. The program covers 5,400 square miles encompassing Maricopa County and surrounding watersheds. The goal of the Flood Control District’s MSP is to reduce response time for emergency managers by providing timely and accurate weather information, primarily regarding the potential for flood-producing rainfall. During the length of the Monsoon season the MSP goes on a weekly rotating 24/7 manned schedule. A Duty Officer is selected for each day who is responsible for issuing MSP products, providing support to clients, and serves as the on-call supervisor during non-business hours. A supporting officer is also named and can be available to the duty officer in the case of a significant weather event. All MSP forecast products are disseminated via email and text alerts. Emergency managers may also be notified by telephone to aid in decision making.

The MSP has broken down the 5,400 square mile operational area into 17 forecast zones. These zones are the primary warning areas identified by emergency management officials. A map of the forecast zone locations is shown below in Figure 1.



MSP PRODUCT DESCRIPTION

Weather Outlook:

The Weather Outlook is disseminated to clients daily no later than 2PM during the monsoon season. This product covers the today through tomorrow period and occasionally the following 2-3 days where appropriate. Occasionally, due to unexpected weather pattern changes, Weather Outlooks will be updated throughout the day or first thing the following morning. Weather Outlooks include a synopsis of expected weather conditions; the “probability of occurrence” of rain; the expected “prime time” for the bulk of the rain; and the amount of rain expected during the prime-time period. Temperature forecasts and trends are included as well as a forecast of peak wind speeds. Click [here](#) for an example. A detailed explainer about the accompanying “Rainfall Outlook Table” is available [here](#).

Message 1 – Alert:

When it is believed developing weather conditions may lead to heavy rain and/or minor to moderate flooding an Alert is issued. Lead time will generally be less than an hour in advance of the expected event. The Alert will normally identify the affected zone(s), the time frame of the event (valid time), rainfall potential, and the type of areas that will be impacted, such as roads and/or washes. Click [here](#) for an example.

Message 2 – Flash Flood Watch:

When it appears the developing weather event may lead to flash flooding a Watch is issued for the possible affected areas. Lead time will generally be 1 to 2 hours in advance of the expected event but can stretch to a day or more with reliable guidance. The Watch will include the time frame it will be in effect (valid time), and a section describing what may take place (comments). Click [here](#) for an example.

Message 3 – Flash Flood Warning:

When it appears that significant flash flooding is imminent or has started to take place, a Warning will be issued for the affected areas. Lead time will generally be less than an hour. The Warning will normally identify the affected zone(s), a time frame of the event, rainfall potential, and a section describing what is expected to take place (comments). Click [here](#) for an example.

Message 1, 2 and 3 Update:

This product, issued as needed, will update an existing Alert, Watch or Warning. Click [here](#) for an example.

Message 4 – Cancel:

When an event (Watch or Warning) no longer poses a threat, and the expiration time has not been reached, a Cancel message may be issued.

Lake Alerts:

In addition to the above MSP program, weather guidance is provided for Maricopa County lakes/reservoirs from June 15 through September 30. Lake Alerts are issued as needed to inform of approaching adverse weather conditions. Emphasis in these statements is on expected wind gusts and lightning activity. Click [here](#) for an example.

Lake Thunderstorm Outlook:

In addition to the above MSP Lake Alerts, 3-day thunderstorm outlook is provided for Maricopa County lakes/reservoirs year-round, including from June 15 through September 30. Thunderstorm outlooks are issued daily to inform of adverse weather potential. Emphasis in these outlooks is on expected risk for lightning, wind gusts ≥ 30 mph, heavy rain and hail. Click [here](#) for an example.

Additional Products:

At the request of clients, site specific products may be issued to support unusual or special operations, such as specific wind forecasts to aid in the fighting of fires, forecasting for special events at the County lakes or parks, or District construction projects.

Additional information and data regarding the FCDMC can be found online [here](#)

2025 MONSOON SEASON RECAP

Historical monsoon rainfall comparisons are made using rainfall averaged across 297 FCDMC ALERT rain gages having 10 years or greater historical record. Monsoon 2025 was characterized as being near normal with 2.71" of average rainfall, which is 92% of the current mean value for the network 2.96". An graphical plot showing the 45-year period of record can be viewed [here](#). It's worth noting that the 2.76" of rainfall that was recorded at Phoenix Sky Harbor Airport (the official NWS station with precipitation records dating back to 1896) was accumulated from ten total rain days. Most of that rainfall (2.43") accumulated over only two measurable rain days. Click [here](#) to see a technical summary plot from Phoenix Sky Harbor Airport covering the monsoon season, courtesy of the University of Arizona CSAP/CLIMAS. Figure 2 offers a more comprehensive picture of the rainfall distribution across the MSP forecast area. This figure was generated using FCDMC ALERT rain gage data from around the County. The shaded contours depict precipitation totals from June 15th – September 30th. The largest rainfall totals fell across the higher terrain of northeastern portions of Maricopa County and within portions of the central Phoenix Valley where a period of strong thunderstorms at the end of September (discussed in more detail below) contributed a significant proportion of seasonal rainfall.

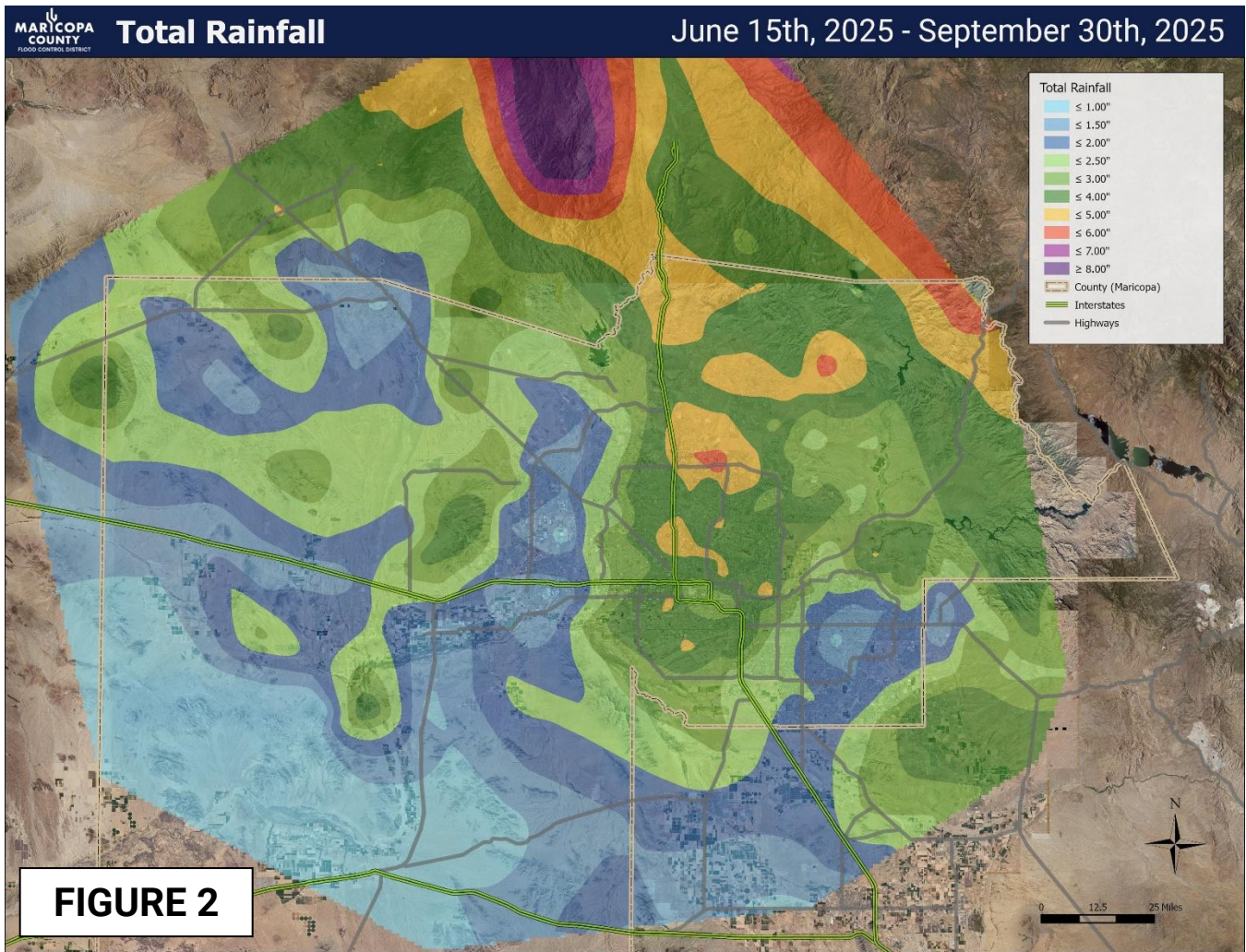
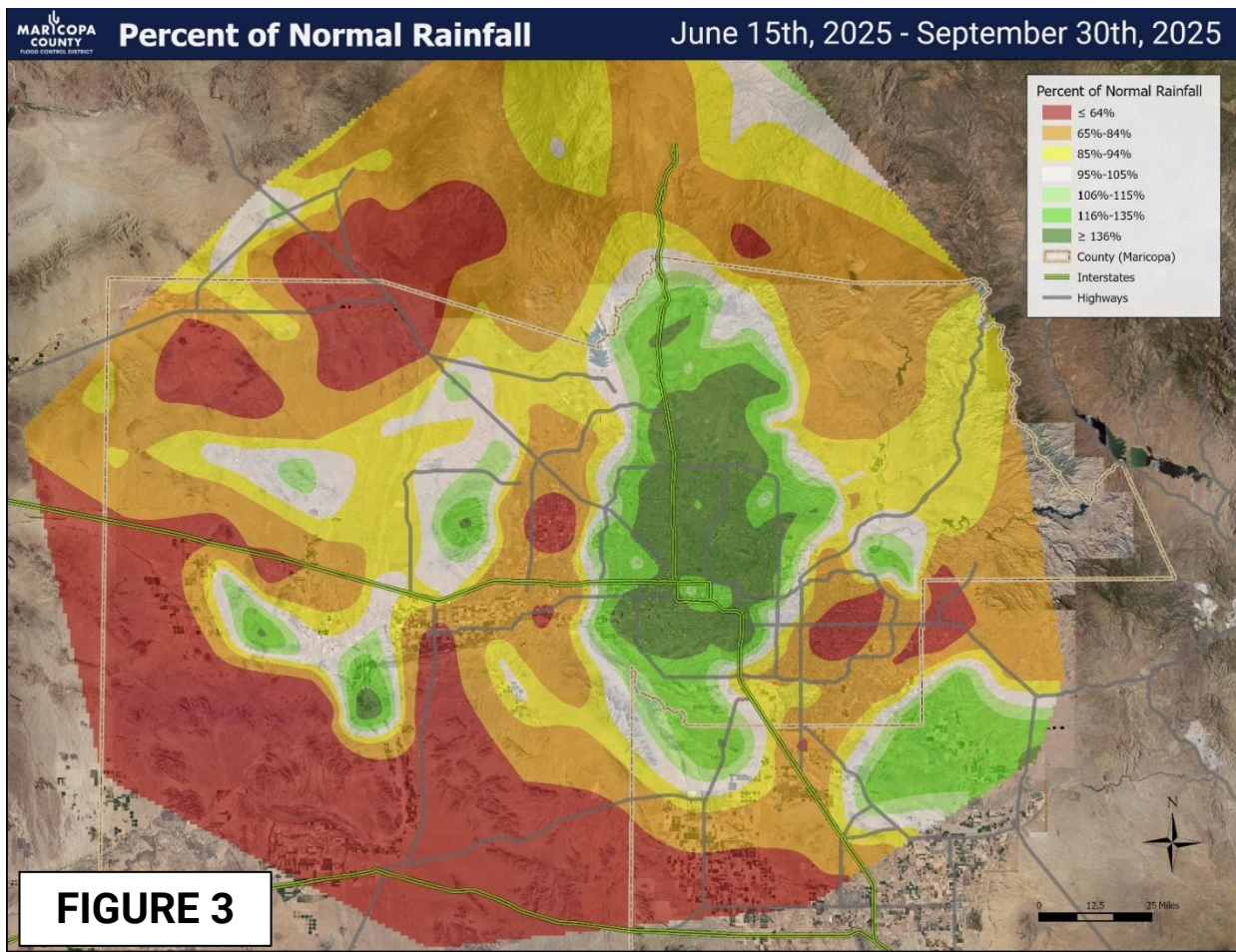


Figure 3, shown below, indicates the ratio of Monsoon 2025 precipitation versus historical normal precipitation. Accumulations were near or above average across many portions of the Phoenix Metropolitan area, aided by late season heavy rainfall. Most notably, central portions of the Phoenix Metropolitan area and pockets of the western county received above normal (100%-136%) rainfall. Northwest Maricopa County regions and much of the southern County was characterized as abnormally dry, achieving 84% or less of normal monsoon precipitation. The bulk of County rainfall occurring from only a handful of impactful storm days across the duration of the monsoon was a common theme during the 2025 season. Data shown by Figures 2 and 3 serve as a strong reminder to the importance of having a widely distributed rain gage network to fully capture the distribution of localized summertime convective rainstorms. A graphical representation showing the progression of ALERT average rainfall throughout Monsoon 2025 compared to prior seasons can be viewed [here](#).



June Recap/Notable Events:

- According to the NWS Phoenix WFO, the month of June was the 7th wettest June on record at Phoenix Sky Harbor Airport due to an unseasonably strong low-pressure system centered to the southwest of Arizona bringing an influx of late spring season subtropical moisture from the Gulf of California. The result was widespread 0.25" to 2"+

inches of measurable rainfall across northern Maricopa County, including the Phoenix Metropolitan area on June 1st. Note the early June rainfall does not count toward Monsoon 2025 because the rain fell before the official June 15th monsoon start.

- After an abnormally warm spring, June maintained this trend. According to the NWS Phoenix WFO, Sky Harbor Airport recorded the 16th warmest June on record with monthly average high temperature of 106.2°F. Additional monsoon climate data for the month of June from the NWS can be found [here](#).

July Recap/Notable Events:

- The month kicked off with a brief period of widespread measurable rainfall on July 2nd and 3rd. A low-pressure system to the west of Arizona surged moisture into the region from the south. Western portions of the County benefited the most having rain totals ranging 0.25"-1.50". Phoenix Sky Harbor recorded 0.16" of rain on July 2nd, which was the only measurable precipitation for the month (111th driest July on record).
- The rest of July featured unusually strong and persistent Pacific low pressure troughing impacting California and Arizona. Consequently, daily storm activity was suppressed due to southwesterly flow, while rainfall opportunities were mainly restricted to the higher terrain northern and eastern outskirts of the County.
- The MSP issued only 4 Message-1 Alert statements, while the NWS Phoenix WFO issued 1 dust storm warning and advisory, 3 severe thunderstorm warnings, 4 flash flood warnings, and 2 flood advisories within Maricopa County on July 2nd.
- Despite a long-term low pressure troughing influence, the average high temperature at Phoenix Sky Harbor Airport of 107.6°F still ranked 12th warmest and the mean temperature of 96.9°F was the 9th warmest on record. One daily record high was set, and three record warm lows were established for the month of July.

August Recap/Notable Events:

- By mid-August high pressure finally began building over the Four Corners region resulting in well above normal afternoon temperatures. For example, a monthly high of 114°F at Phoenix Sky Harbor Airport was set on the 21st. The large-scale monsoon high shift also promoted favorable southeasterly moisture transport from the Gulf of Mexico, northern Mexico, and Gulf of California. This allowed a noticeable uptick in daily thunderstorm activity particularly across the higher terrain of Arizona. Mountain thunderstorms were able to propagate to interior sections of the County, at times including Metro Phoenix.
- The most notable storm event affecting the County during the month of August occurred during the late afternoon on the 25th. Increased instability and moisture coupled with a capping inversion breaking during the afternoon hours allowed thunderstorms to propagate from southeastern Arizona towards Maricopa County. Robust storm activity continued to travel north and west along a leading strong outflow boundary. The potent outflow boundary resulted in the most significant dust storm of

Monsoon 2025 (shown as cover photo to this report). Large amounts of dust were kicked up and transported long distances dropping visibility to near zero across Casa Grande before then moving into Metro Phoenix. Winds up to 60 miles per hour were recorded; however, measurable rainfall immediately followed the advancing dust wall delivering localized amounts up to an inch. A complete storm overview of this event was generated by the NWS Phoenix WFO and can be viewed [here](#).

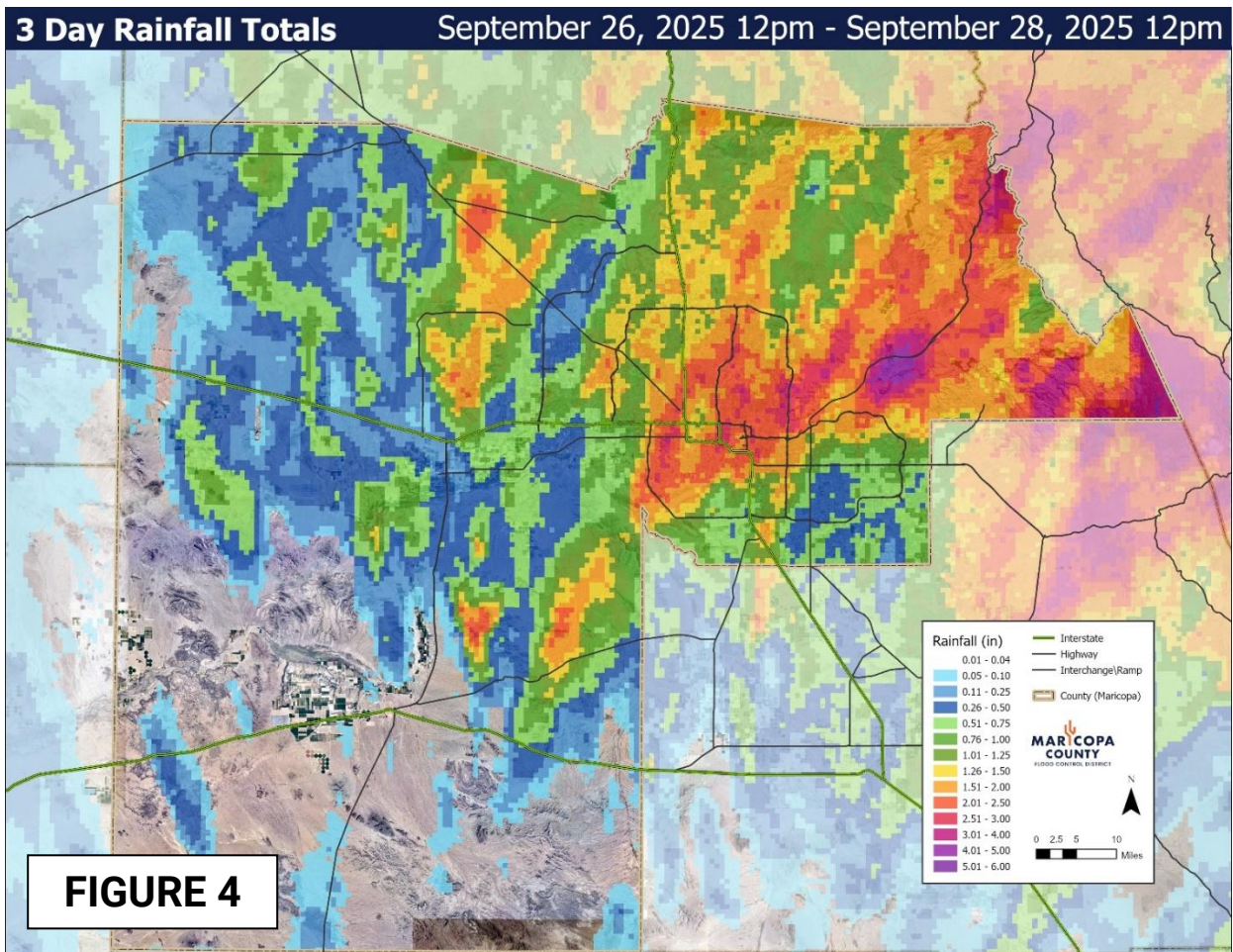
- The MSP issued 25 Message-1 Alert statements during the month of August. The NWS Phoenix WFO issued 6 dust storm advisories, seven dust storm warnings, 9 flood advisories, 2 flood warnings, 2 flash flood warnings, and 13 severe thunderstorm warnings inside Maricopa County.
- According to the NWS Phoenix WFO, Sky harbor Airport registered a total of 0.34" of rain during the month ranking as the 96th driest on record. The average high temperature of 109.3°F was 4th warmest and a mean temperature of 98.2°F was the 5th warmest on record. Four daily record highs were set along with four daily record lows.

September Recap/Notable Events:

- Monsoon 2025 went out with a bang as 83% of the total ALERT average monsoon rainfall occurred in the month of September, 2.26" out of 2.71". There were a few notable storm days, however, the bulk of the month's rainfall at many locations occurred on the 26th, including an impressive 1.64" falling at Phoenix Sky Harbor.
- September was characterized by a sustained transitional monsoonal setup with high pressure residing southeast of Arizona coupled with a persistent low pressure system to the west. Both features brought tropical moisture from the south into Arizona leading to significant rainfall at times, especially towards the end of the month.
- On the evening of September 3rd into the 4th, adequate instability and moisture allowed high based thunderstorms surrounding mountainous terrain to sweep over the Phoenix Metropolitan area, dropping measurable rain up to 0.25". Rainfall over the far West Valley was more significant with localized gages having between 0.50"-1.00".
- On September 18th and 19th, a favorable monsoon pattern forced enhanced southwesterly moisture transport, diffluence aloft, and a thunderstorm environment having greater instability. Numerous thunderstorms were able to develop and propagate across Maricopa County. Phoenix Sky Harbor Airport recorded 0.23" of rain for the duration of the event; however, widespread heavy rainfall tallied 1"-2" around the Cave Creek and North Scottsdale area.
- The season's most impactful thunderstorm outbreak and flooding event for the County happened September 26th-27th. Excessive moisture coupled with enhanced instability and wind shear from a slow moving low pressure trough. The resultant outbreak of thunderstorms led to damaging winds, severe hail, and significant flooding across Southcentral Arizona. Widespread training thunderstorms brought waves of very intense rain focused mainly over the central and eastern Phoenix Valley. Up to 1"-3"+ of rain fell over the duration of the event, as shown in Figure 4. Intense rainfall rates were observed, at times reaching 2" in 30 minutes (e.g., over the community of Fountain

Hills). The very heavy rainfall over a relatively short time span resulted in widespread urban flooding, significant measured water flows (e.g., the IBW and ACDC), property damage, and even loss of life. A complete storm overview of this impactful event was generated by the NWS Phoenix WFO and can be viewed [here](#).

- The combined 73 issued MSP message statements (i.e., Message-1 Alert, Message-2 Flash Flood Watch, and Message-3 Flash Flood Warning) for September compared to the 102 issued for the entire Monsoon 2025 helps highlight the surge in thunderstorm activity to end the season. There was also a significant rise in warning/advisory products issued by the NWS Phoenix WFO for Maricopa County: 16 Dust Storm Advisories, 3 Dust Storm Warnings, 21 Flood Advisories, 6 Flood Warnings, 20 Flash Flood Warnings, 35 Severe Thunderstorm Warnings, and 1 Severe thunderstorm Watch (issuance by the NOAA Storm Prediction Center).
- According to the NWS Phoenix WFO, Sky Harbor Airport registered 2.26” of rain during the month equating to the 10th wettest September on record. The average high temperature of 100.5°F was ranked 30th warmest and mean temperature of 90.2°F was the 15th warmest on record. Two daily record warm lows were set on the 8th and 25th of the month.



MSP Issued Products Recap:

A total of 102 Forecast Zone-specific messages were issued by the MSP spread across 14 different days during the length of the monsoon season. Table 1, below, shows the monthly breakdown by Forecast Zone of messages issued including season totals. Of the 102 Messages issued there were 75 Message-1 Alerts, 17 Message-2 Flash Flood Watches, 10 Message-3 Flash Flood Warnings, and 0 Message-4 Cancels. The Alert Operation Center (AOC) was not activated during Monsoon 2025 as none of the rain events ended up posing any serious threat to local dams or District flood control facilities.

TABLE 1: MSP Messages Issued – Monsoon 2025					
Forecast Zone	June	July	August	September	Total
East Valley	0	0	2	5	7
Gila River	0	1	1	2	4
Phoenix North	0	0	4	8	12
Phoenix South	0	0	4	7	11
Scottsdale South	0	0	2	6	8
Southeast Valley	0	0	2	3	5
Lower Salt River Lakes	0	0	1	2	3
New River/Cave Creek	0	0	2	6	8
Scottsdale North	0	0	0	7	7
Superstition	0	0	1	2	3
Northwest Valley	0	0	1	5	6
Upper Centennial	0	0	3	5	8
West Valley	0	1	0	4	5
Wickenburg	0	0	1	4	5
Gila Bend	0	0	1	2	3
Palo Verde	0	1	0	3	4
Rainbow Valley	0	1	0	2	3
All Zones	0	4	25	73	102

Table 2, below, shows the monthly breakdown of Lake Alerts issued including seasonal totals. There were 44 Lake Alert statements issued for the County Lakes Program which represent Lake Pleasant, Horseshoe Lake, Bartlett Lake, Saguaro Lake, Canyon Lake, and Apache Lake.

TABLE 2: MSP Lake Alerts Issued – Monsoon 2025					
Recreational Zone	June	July	August	September	Total
Lake Pleasant	0	0	0	3	3
Horseshoe Lake	0	1	3	4	8
Bartlett Lake	0	1	2	8	11
Saguaro Lake	0	0	2	3	5
Canyon Lake	0	1	2	4	7
Apache Lake	0	1	2	6	9
All Zones	0	4	11	29	44

MSP VERIFICATION METRICS AND CRITERIA

Several key verification metrics and a clear set of operational based criteria were adopted in order to conduct a thorough and complete verification of MSP products issued during the 2025 monsoon season. This chapter is broken down into four sections: Outlooks, Messages, Lake Alerts, and Storm Total Precipitation. Each section discusses the verification metrics used and the criteria followed to compute the statistics displayed in the summary chapter sections. A list of frequently used terms including definitions and acronyms as used throughout this report is listed below. Raw daily MSP monsoon forecast data and additional summaries of verification data are provided in Appendices A-D.

Observed Rainfall: The amounts of total rainfall gathered from either ALERT rain gages, gage corrected radar estimations (GAQPE), or local storm reports (LSRs). Note that “Trace” amounts of precipitation (observed or forecast) are not considered measurable for verification purposes.

Operationally Significant Event (OSE): A rain event within a MSP forecast zone with observed rainfall equal or greater than 0.50”. Starting in 2025, a second OSE threshold was introduced for preliminary evaluation having observed rainfall equal or greater than 1.25”.

Hit: Considered a correct forecast.

Miss: Considered an incorrect forecast.

Correct Negative: Considered a correct forecast (e.g., no rain forecast and no rain observed).

Forecast Accuracy: A measure of the ability to correctly forecast daily rainfall potential. Given as a percentage and calculated using Equation 1 below:

$$(1) \text{ Forecast Accuracy} = \left(\frac{\text{Correct Forecasts}}{\text{Total Forecasts}} \right) \times 100$$

Probability of Detection (POD): A measure of the ability to correctly discriminate heavy rain days (OSEs) from non-rain/minor rain days. Given as a percentage and calculated using Equation 2 below:

$$(2) \text{ POD} = \left(\frac{\text{OSEs Correctly Detected}}{\text{Total OSEs}} \right) \times 100$$

False Alarm: Occurs when an OSE is forecast for a location but does not occur.

False Alarm Rate: Measures the number of false alarms compared to forecast days. Given as a percentage and calculated using Equation 3 below:

$$(3) \quad FAR = \left(\frac{False\ Alarms}{Total\ Forecasts} \right) \times 100$$

Threat Score (also known as the Critical Success Index): Measures the fraction of observed and/or forecast events that were correctly predicted. TS can be thought of as forecast accuracy when correct negatives have been removed from consideration. Given in percentage and calculated using Equation 4 below.

$$(4) \quad TS = \left(\frac{Hits}{Hits + Misses + False\ Alarms} \right) \times 100$$

Percent Error: A measure of relative error given in percent. Calculated using Equation 5 below:

$$(5) \quad \% \text{ Error} = \left(\frac{Forecast - Observed}{Observed} \right) \times 100$$

Quantitative Precipitation Forecast (QPF): Forecast zone or basin specific rainfall forecast including a rainfall amount or range given in inches and/or intensity. Prior to 2025, a probability of measurable precipitation (“PoP”) was also provided in daily Outlooks in conjunction with a QPF forecast. Starting in 2025, the MSP has replaced the “PoP” value with a measurable rainfall (≥ 0.01) spatial coverage descriptor. The MSP defines “Limited” spatial rainfall coverage at <20% (but greater than zero), “Scattered” ranging 20% to 50%, and “Widespread” having greater than 50% coverage. The new forecast spatial rainfall coverage variable gives customers better context to understand expected weather conditions.

Gage Adjusted Quantitative Precipitation Estimate (GAQPE): Radar estimated rainfall total, product provided by Vieux & Associates, Inc.

Lead Time: The amount of time between when the forecast statement was issued/valid and the onset of the event (observable).

Qualifying Event: An issued statement/QPF that counts in the verification process.

The following four sections explain the development of verification statistics as tabulated in Appendices A-D.

More information on historical MSP verification methodology is detailed in prior MSP Verification reports available [here](#).

OUTLOOKS:

QPF and Forecast Rainfall Coverage Accuracy:

Either a hit or a miss was selected for each day and for each respective forecast type. A hit for QPF was assigned when observed rainfall was reasonably within the QPF threshold range (i.e., within 25 percent of the upper or lower bound QPF range). A hit for rainfall coverage is scored

should observed measurable rainfall coverage fall within the appropriate range. A miss for either QPF or forecast rainfall coverage includes missed precipitation events, under forecasts, over forecasts, or false alarms. Forecast accuracy was then populated for each forecast zone and all zones combined on a monthly and seasonal basis.

Probability of Detection:

Starting in 2025, POD for the two OSE thresholds ≥ 0.50 " and ≥ 1.25 " were evaluated independently. A dash ("-") was assigned to all days when observed rainfall was below the respective OSE threshold. On days when observed rainfall met or exceeded an OSE threshold either a hit or a miss was assigned. A hit was assigned if the QPF was greater than or equal to a particular OSE threshold and observed rainfall was also greater than or equal to that OSE threshold. A miss resulted when either 1) no QPF was given or 2) $QPF \leq OSE$ and observed rainfall was $\geq OSE$. Values were then populated for each Forecast Zone and all zones combined. POD was calculated by month and as a season aggregate.

False Alarm Rate:

False alarms are denoted by a "y". A false alarm was assigned on days where the observed rainfall failed to meet an OSE threshold when a QPF called for it. Values were then populated for each Forecast Zone and all zones combined. False alarm rates were then calculated by month and as a season.

Threat Score (also known as the Critical Success Index):

Threat Scores were calculated for specific event types including MSP's ability to forecast measurable rain days (≥ 0.01 "), OSE (≥ 0.50 "), and OSE (≥ 1.25 "). The Threat Score is a valuable forecast accuracy assessment metric as it assumes correct negatives are not important, which prevents inflated reported accuracy that may result by including numerous accurately predicted non-OSE days, for example. Values were populated for each forecast zone and all zones combined for the length of the season. Prior to 2025, a single general Threat Score was calculated combining daily QPF accuracy and false alarms related to probability of detection for OSE ≥ 0.50 ". This legacy Threat Score will continue to be calculated and included in subsequent MSP Verification Reports to allow for historical comparison purposes.

Tables containing all the raw data used in generating the verification metrics discussed above for the MSP daily Outlooks can be found in [Appendix A](#).

MESSAGES:

Forecast Accuracy:

A hit was assigned if a rain, stream, or dam alarm was triggered during the valid period of the issued Message and/or if observed or GAQPE rainfall amount occurring in the warned Forecast Zone reached minimum OSE threshold (i.e., ≥ 0.50 "). Conversely a miss was assigned

if neither of these two criteria were met. Values were then populated for each forecast zone and all zones combined. Forecast accuracy was then calculated by month and season total.

Lead Time:

Lead time was calculated for each issued Message when possible. Time was measured from Message issuance to the first ALERT alarm triggered (rain, stream, or impoundment).

Tables containing all of the raw data used in generating the verification metrics discussed above for the MSP Messages can be found in [Appendix B](#).

LAKE ALERTS:

Forecast Accuracy:

A hit was assigned if any of the following observations occurred during the valid period of the issued Lake Alert: lightning within the recreational area boundary, wind ≥ 30 mph, or hail/heavy rain. Conversely a miss was assigned if none of these three criteria were observed. Values were then populated for each recreational zone and all zones combined. Forecast accuracy was then calculated by month and season total.

Lead Time:

Lead time was calculated for each issued Lake Alert when possible. Time was measured from the Lake Alert issuance to the first observation (lightning within the recreational area boundary, wind ≥ 30 mph, or hail/heavy rain).

Tables containing all the raw data used in generating the verification metrics discussed above for the MSP Lake Alerts can be found in [Appendix C](#).

STORM TOTAL PRECIPITATION:

Forecast Accuracy:

Only Message-1 type statements where a QPF storm total precipitation (STP) amount was provided are evaluated. Observational data used for this verification included Maricopa County ALERT rain gages, local storm reports, and/or radar GAQPE. Either a hit or a miss was selected for each qualifying event. A “hit” was assigned when the observed maximum observed rainfall during a message statement period falls within the 25 percent error range determined by the lower and maximum forecast storm QPF, otherwise the over or under QPF is a “miss”. Values were then populated for each forecast zone and all zones combined. Forecast accuracy was then calculated by month and season.

Please note, verification for QPF “storm total precipitation” is now based on a maximum GAQPE value for verification metrics versus a previous method using radar estimated maximum range of precipitation (e.g., 1.00” – 1.50” bin, etc.). This change was implemented in

2024. Evaluation using a maximum GAQPE will provide an improvement to QPF STP forecast accuracy precision.

Tables containing all raw data used in generating the verification metrics discussed above for the MSP Messages can be found in [Appendix D](#).

OUTLOOK VERIFICATION

Table 3, below, shows the Outlook verification of seasonal totals for each FZ. Complete daily data tables for each FZ can be viewed in [Appendix A](#): Tables A 1-17. A monthly breakdown summary is provided in Table A-18.

Overall, the number of measurable rain days during Monsoon 2025 varied between 29 and 43 across MSP FZs. Outlook FA during the length of the monsoon season for all FZs combined was 74.3%. Forecast accuracy for the season was largely “satisfactory” ranging between 67.6% to 72.2% at 8 FZs, while 9 FZs met the “excellent” category being equal or greater than the 75% threshold. The Upper Centennial FZs had the highest accuracy of the 2025 season at 78.3%, while the West Valley and Southeast Valley FZs had the lowest accuracy of 67.6%. There was a tendency for the MSP to under forecast daily QPF at all FZs. The proportion for measurable rain day false alarms across all FZs were very low ranging 0.9% to 6.5%. Missed days having measurable rainfall when none was forecast varied from 6 to as high as 18 instances. There were several days this season when the late evening capping inversion over the Phoenix Metropolitan area was broken due to distant outflow intrusions, which led to thunderstorm development despite a low probability of occurrence.

Several new verification metrics were implemented for 2025, including reviewing forecast spatial rainfall coverage accuracy. This new forecast variable proved challenging as mean accuracy across all FZs for the season was 28.1% and ranged from as low as 17.2% in Scottsdale South FZ and as high as 42.4% in the Upper Centennial FZ.

The POD metric is quite important because it distinguishes how well MSP forecasters detected OSEs. The POD for OSEs ≥ 0.50 ” during the length of the monsoon season for all FZs combined was 55.1%, which represents a decrease from season’s prior 63.9%. In general, an aggregate POD of over 50% is still considered sufficient, while the MSP program continually strives to reach the excellent 75% threshold recognized by the forecast community. The Gila Bend FZ did have a POD above the 75% accuracy threshold with the remaining FZs ranging from 30% and 71.4%. For context, all FZs were impacted by an OSE at some point during Monsoon 2025; however, the number of events varied substantially from 7 for the Southeast Valley FZ to upwards of 21 in the Gila Bend FZ.

Additionally, the new exploratory OSE ≥ 1.25 " threshold was also evaluated for POD. These very heavy rainfall events are less common and more difficult to predict. Very heavy rain events ranged from only one instance at both the Palo Verde and Superstition FZs up to 8 at the West Valley FZ. From a statistical standpoint, the limited sample size of this type of event makes reported accuracy metrics sensitive to hits and misses. Overall, POD for OSE ≥ 1.25 " fell between 0% at Gila River and Wickenburg FZs and 100% for the Superstition and Palo Verde FZs.

The FAR metric is important to keep track of how often MSP forecasters predicted an operationally significant day that did not occur. Too many false alarms can degrade user confidence in the forecasts. In general, a FAR value below 50% is sufficient and below 25% is considered excellent within the forecast community. The overall mean 7.1% FAR for OSE ≥ 0.50 " across all FZs during the length of the monsoon season of was higher than Monsoon 2024's 3.7%. No individual FZ FAR exceeded 14%. In a similar evaluation, the aggregate FAR for the new OSE ≥ 1.25 " was excellent at 2.3% ranging between 0.9%-4.6% across all FZs.

The final metric included in Table 3 was TS. Overall, forecast skill was good at 69.6% averaged for all FZs over the length of the active season with values as low as 63.5% for the West Valley FZ and high as 74.6% in the Upper Centennial FZ. This "TS Legacy" calculation has historically been tracked throughout much of the period evaluating MSP monsoon forecast verification (since 2014, see Table 7). However, a variety of new TS metrics were also introduced for Monsoon 2025 to provide additional forecast verification context, including separate TS for detecting rain day events (≥ 0.01 "), OSE ≥ 0.50 " , and OSE ≥ 1.25 " . As is typical in official forecasting programs, TS values associated with relatively rare and extreme rainfall event detection, such as OSE ≥ 1.25 " , tend to decrease significantly (see Table 3) due to inherent forecasting challenges.

TABLE 3: MSP Weather Outlook Verification – Monsoon 2025

Forecast Zone	Accurate Forecasts	AOF (%)	AOC (%)	Sig. $\geq 0.50''$ Events	POD $\geq 0.50''$ (%)	False Alarms $\geq 0.50''$	FAR $\geq 0.50''$ (%)	Sig. $\geq 1.25''$ Events	POD $\geq 1.25''$ (%)	False Alarms $\geq 1.25''$	FAR $\geq 1.25''$ (%)	TS Legacy (%)	TS $\geq 0.01''$ (%)	TS $\geq 0.50''$ (%)	TS $\geq 1.25''$ (%)
East Valley	74/108	68.5	21.4	7/14	50	1/108	0.1	1/3	33.3	1	0.9	67.9	52.2	46.7	25.0
Gila River	75/108	69.4	26.2	7/12	58.3	8/108	7.4	0/7	0.0	2	1.9	64.7	60.9	35.0	0.0
Phoenix North	82/108	75.9	21.9	4/12	33.3	5/108	4.6	1/6	16.7	2	1.9	72.6	62.9	23.5	12.5
Phoenix South	78/108	72.2	24.3	6/14	42.9	3/108	2.8	2/7	28.6	2	1.9	71.2	55.0	35.3	22.2
Scottsdale South	84/108	77.8	17.2	3/10	30	5/108	4.6	1/4	25.0	1	0.9	74.3	63.3	20.0	20.0
Southeast Valley	73/108	67.6	31.7	3/9	33.3	7/108	6.5	1/4	25.0	1	0.9	72.2	59.5	18.8	20.0
Lower Salt River Lakes	84/108	77.8	27.3	10/14	71.4	11/108	10.2	1/4	25.0	2	1.9	71.4	67.5	40.0	16.7
New River/Cave Creek	78/108	72.2	21.6	9/16	56.3	9/108	8.3	1/6	16.7	3	2.8	67.5	62.8	36.0	11.1
Scottsdale North	83/108	76.9	23.5	6/11	54.5	8/108	7.4	2/3	66.7	1	0.9	71.6	64.1	31.6	50.0
Superstition	77/108	71.3	32.6	5/7	71.4	10/108	9.3	1/1	100	2	1.9	65.3	55.1	29.4	33.3
Northwest Valley	84/108	77.8	29.4	6/12	50	7/108	6.5	1/5	20.0	2	1.9	73.9	59.0	31.6	14.3
Upper Centennial	85/108	78.3	42.4	13/19	68.4	6/108	5.6	2/6	33.3	4	3.7	74.6	69.4	52.0	20.0
West Valley	73/108	67.6	26.3	7/14	50	7/108	6.5	3/8	37.5	1	0.9	63.5	47.6	33.3	33.3
Wickenburg	82/108	75.9	32.3	3/9	33.3	15/108	13.9	0/3	0.0	5	4.6	66.7	62.2	12.5	0.0
Gila Bend	81/108	75	31.7	17/21	81	11/108	10.2	2/6	33.3	5	4.6	68.1	73.3	53.1	18.2
Palo Verde	83/108	76.9	36.7	3/8	37.5	8/108	7.4	1/1	100	5	4.6	71.6	54.5	18.8	16.7
Rainbow Valley	78/108	72.2	31.6	10/14	71.4	9/108	8.3	1/6	16.7	3	2.8	66.7	61.4	43.5	11.1
All Zones	1364/1836	74.3	28.1	119/216	55.1	130/1836	7.1	21/80	26.3	42/1836	2.3	69.6	60.5	34.4	17.2

MESSAGE VERIFICATION

The MSP message statements carry a higher priority threat-wise than the daily outlooks. These statements (Alerts, Watches, and Warnings) serve as the most critical products issued by the MSP during the monsoon season to our clients. A high level of accuracy is required when forecasting these types of events as the information they provide is directly applicable to the potential or imminent flooding situation.

Table 4, below, shows the issued message verification broken down by FZ and month. Complete data tables for each FZ can be viewed in [Appendix B](#): Tables B-1, B-2, and B-3. There were 102 qualifying messages issued over the length of the season, significantly more than the 29 issued in Monsoon 2024. Forecast accuracy for all FZs combined, over the length of the season, was very good at 87.3%. All 17 FZs had message statements issued during Monsoon 2025 but varied from as low as 3 to as many as 12. Individual FZ accuracy on a seasonal basis was excellent as 15 of the 17 FZs have statement accuracy ranging from 75% to 100%.

Overall, the area experienced a near average monsoon for messages issued based on MSP Verification Reports since 2012). However, the season was lopsided having little to no daily thunderstorm activity until the middle of August. The month of September was particularly active, notably 2nd-5th, 19th, and 26th-27th. This active period accounted for 73 of the season's total 102 issued statement products. This was in stark contrast to Monsoon 2024, which did not have any messages issued for the end of the monsoon. The final metric included for message statement verification is lead time. The average lead time (data in [Appendix B](#), Table B-3) for all M-1 Alerts combined over the length of the monsoon season was approximately 37 minutes.

TABLE 4: MSP Issued Statements Verification, broken down by month and Forecast Zone – Monsoon 2025

	June		July		August		September		Season Totals	
Forecast Zone	Correct Statements	AOF (%)	Correct Statements	AOF (%)	Correct Statements	AOF (%)	Correct Statements	AOF (%)	Correct Statements	AOF (%)
East Valley	0/0	n/a	0/0	n/a	2/2	100%	4/5	80%	6/7	85.7%
Gila River	0/0	n/a	1/1	100%	1/1	100%	1/2	50%	3/4	75%
Phoenix North	0/0	n/a	0/0	n/a	4/4	100%	7/8	88%	11/12	91.7%
Phoenix South	0/0	n/a	0/0	n/a	4/4	100%	7/7	100%	11/11	100%
Scottsdale South	0/0	n/a	0/0	n/a	0/2	0%	5/6	83.3%	5/8	63%
Southeast Valley	0/0	n/a	0/0	n/a	2/2	100%	2/3	66.7%	4/5	80%
Lower Salt River Lakes	0/0	n/a	0/0	n/a	1/1	100%	2/2	100%	3/3	100%
New River/Cave Creek	0/0	n/a	0/0	n/a	2/2	100%	5/6	83.3%	7/8	88%
Scottsdale North	0/0	n/a	0/0	n/a	0/0	n/a	7/7	100%	7/7	100%
Superstition	0/0	n/a	0/0	n/a	1/1	100%	1/2	50%	2/3	66.7%
Northwest Valley	0/0	n/a	0/0	n/a	1/1	100%	4/5	80%	5/6	83.3%
Upper Centennial	0/0	n/a	0/0	n/a	3/3	100%	4/5	80%	7/8	88%
West Valley	0/0	n/a	1/1	100%	0/0	n/a	4/4	n/a	5/5	100%
Wickenburg	0/0	n/a	0/0	n/a	1/1	n/a	3/4	75%	4/5	80%
Gila Bend	0/0	n/a	0/0	n/a	1/1	100%	2/2	100%	3/3	100%
Palo Verde	0/0	n/a	1/1	100%	0/0	n/a	2/3	66.7%	3/4	75%
Rainbow Valley	0/0	n/a	1/1	100%	0/0	n/a	2/2	100%	3/3	100%
All Zones	0/0	n/a	4/4	100%	23/25	92%	62/73	84.9%	89/102	87.3%

LAKE ALERT VERIFICATION

Weather guidance is provided to Maricopa County lakes/reservoirs and the recreational zones which encompass them in the form of Lake Alerts. These statements are issued as needed to inform staff/personnel of approaching adverse weather conditions with an emphasis on wind gusts and lightning activity and then to a lesser degree hail/heavy rainfall. A high level of accuracy is required when forecasting these types of events as lake alerts are considered warnings to the recreational community (staff, boaters, hikers, and campers).

Table 5, below, shows the issued Lake Alert verification broken down by recreational zone and month. Complete data tables for each recreational zone can be viewed in [Appendix C: Table C-1](#). There was 44 Lake Alerts issued over the length of the season with the majority of them occurring in September with 29. Forecast accuracy for the recreational zones combined, over the length of the season, was 88.6%. All lake recreational zones exceeded the 75% accuracy threshold. As stated earlier, 50% accuracy is considered sufficient and 75% and above is considered excellent within the forecast community. The average lead time (not shown) for all lakes/reservoirs combined over the length of the monsoon season was just over 17 minutes. On the morning of September 26th, a proactive Lake Alert product was issued for all zones in anticipation of a widespread severe thunderstorm outbreak later during the day, which verified. This specific “well in advance” Lake Alerts (up to 7 hours) were not included in calculating lead time.

TABLE 5: MSP Lake Alerts Issued - Monsoon 2025										
Recreational Zone	June		July		August		September		Season Totals	
	Correct Alerts	AOF (%)	Correct Alerts	AOF (%)	Correct Alerts	AOF (%)	Correct Alerts	AOF (%)	Correct Alerts	AOF (%)
Lake Pleasant	0/0	n/a	0/0	n/a	0/0	n/a	3/3	100%	3/3	100%
Horseshoe Lake	0/0	n/a	0/1	0%	3/3	100%	4/5	80%	7/9	77.8%
Bartlett Lake	0/0	n/a	0/1	0%	2/2	100%	8/8	100%	10/11	90.9%
Saguaro Lake	0/0	n/a	0/0	n/a	1/2	50%	3/3	100%	4/5	80%
Canyon Lake	0/0	n/a	1/1	100%	2/2	100%	4/4	100%	7/7	100%
Apache Lake	0/0	n/a	1/1	100%	2/2	100%	5/6	83.3%	8/9	88.9%
All Zones	0/0	n/a	2/4	50%	10/11	90.9%	27/29	93.1%	39/44	88.6%

QPF STORM TOTAL PRECIPITATION VERIFICATION

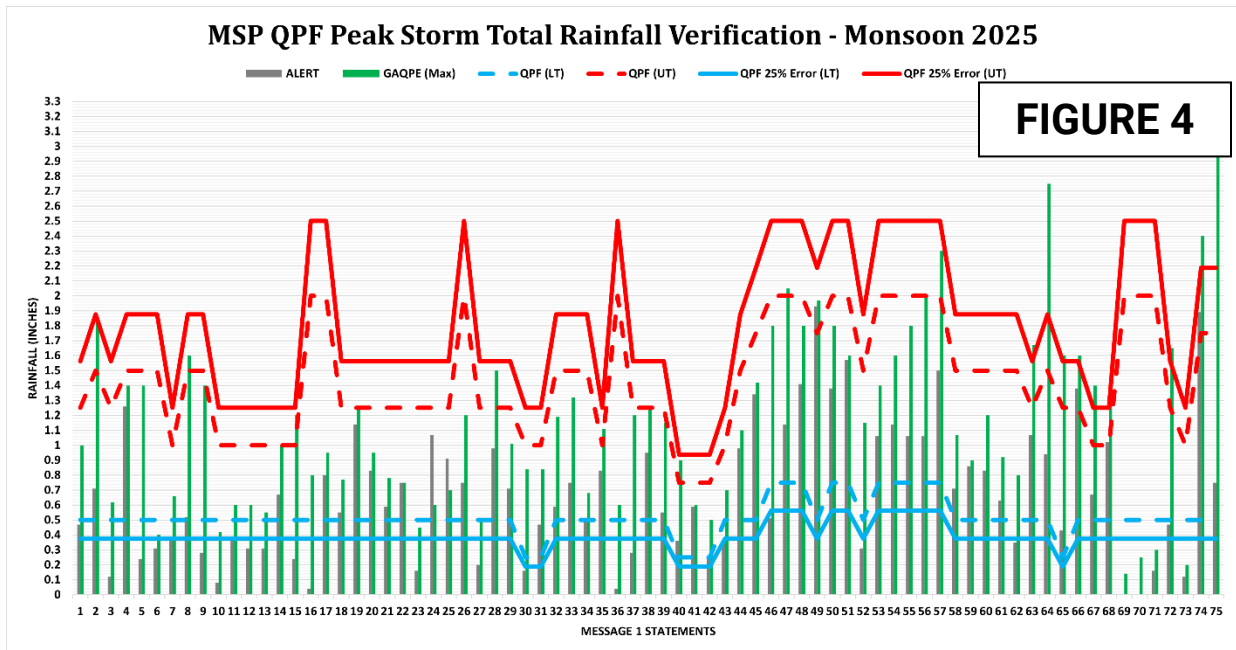
The MSP has placed added emphasis on including QPF information within message statements, specifically M-1 Alerts. These messages are normally issued before the onset of rain events and precede warning issuance in order to maximize lead time for affected locations. Providing STP that will likely accompany thunderstorms moving through a FZ is intended to help clients make well-informed and proactive decisions. The error thresholds used in the verification process are discussed in the [MSP Verification Metrics and Criteria](#) section.

Table 6, on the next page, shows the issued message verification broken down by FZ and month. Complete data tables for each FZ can be viewed in [Appendix D](#): Table D-1. Forecast accuracy of 82.7% for all FZs combined over the length of the season improved greatly compared to Monsoon 2024's 65.5%. Additionally, the 75 qualifying events marked a significant increase compared to 29 in Monsoon 2024. However, Monsoon 2025 was lopsided starting relatively quietly in both June and July before thunderstorm activity became much more prominent during the second half of the season. There were no significant storm events to assess for the month of June, while accuracy in July came in at 75% related to just four qualifying events impacting four FZs occurring during one storm day. Accuracy in August was 92% from 25 events spread across 5 storm days impacting 13 of 17 FZs. Forecast accuracy was 78.3% in September with an additional 46 events over 8 operationally active days. Furthermore, the month of September was a very active period of being the only month with OSEs occurring at all 17 FZs. Like the season prior, most events over the course of the monsoon tended to be under-forecast by the MSP. A summary of verification for all 2025 qualifying events are shown in Figure 4.

It is important to remember observed storm total rainfall data is typically gathered from either ALERT rain gages or provided from local storm reports. In either case, accurate measurements of peak rainfall are contingent upon a thunderstorm rain core directly passing over a gage site. In this case, gage adjusted radar rainfall estimates (e.g., GAQPE) were used to fill in the gaps that would otherwise be missed in the FZs.

TABLE 6: QPF Storm Total Precipitation Verification - Monsoon 2025

Forecast Zone	June		July		August		September		Season Totals	
	Correct QPF	AOF (%)	Correct QPF	AOF (%)	Correct QPF	AOF (%)	Correct QPF	AOF (%)	Correct QPF	AOF (%)
East Valley	0/0	n/a	0/0	n/a	2/2	100%	2/2	100%	4/4	100%
Gila River	0/0	n/a	1/1	100%	1/1	100%	1/1	100%	3/3	100%
Phoenix North	0/0	n/a	0/0	n/a	3/4	75%	4/5	80%	7/9	77.8%
Phoenix South	0/0	n/a	0/0	n/a	4/4	100%	3/4	75%	7/8	88%
Scottsdale South	0/0	n/a	0/0	n/a	2/2	100%	3/3	100%	5/5	100%
Southeast Valley	0/0	n/a	0/0	n/a	2/2	100%	2/2	n/a	4/4	100%
Lower Salt River Lakes	0/0	n/a	0/0	n/a	1/1	100%	1/1	100%	2/2	100%
New River/Cave Creek	0/0	n/a	0/0	n/a	2/2	100%	3/5	60%	5/7	71.4%
Scottsdale North	0/0	n/a	0/0	n/a	0/0	100%	4/4	100%	4/4	100%
Superstition	0/0	n/a	0/0	n/a	1/1	100%	1/1	100%	2/2	100%
Northwest Valley	0/0	n/a	0/0	n/a	1/1	100%	2/4	50%	3/5	60%
Upper Centennial	0/0	n/a	0/0	n/a	3/3	100%	3/4	75%	6/7	85.7%
West Valley	0/0	n/a	1/1	100%	0/0	n/a	3/3	100%	4/4	100%
Wickenburg	0/0	n/a	0/0	n/a	1/1	100%	2/3	66.7%	3/4	75%
Gila Bend	0/0	n/a	0/0	n/a	0/1	0%	1/1	100%	1/2	50%
Palo Verde	0/0	n/a	1/1	100%	0/0	n/a	1/2	50%	2/3	66.7%
Rainbow Valley	0/0	n/a	0/1	0%	0/0	n/a	0/1	0%	0/2	0%
All Zones	0/0	n/a	3/4	75%	23/25	92%	36/46	78.3%	62/75	82.7%



SUMMARY

The Flood Warning Branch of the FCDMC operates a year-round Meteorological Services Program (MSP) that's purpose is to provide detailed weather forecasts and support to county, city, and other local agencies encompassing Maricopa County and its contributing watersheds. In particular, during the length of the monsoon season, it is the specific goal of the MSP to reduce response time for emergency managers by providing timely and accurate weather information, primarily regarding the potential for flood-producing rainfall. This report provides a compiled set of verification statistics based on products issued by the MSP during the length of the 2025 monsoon season. Outlooks, Messages, Lake Alerts, and QPF Storm Total Precipitation were the four products analyzed in this report.

Verification of FZ daily outlooks were conducted using FA, POD, FAR, and TS (as discussed in the [MSP Verification Metrics and Criteria](#) section of this report). When comparing all FZs combined over the length of the monsoon season, FA was 74.3%, POD was 55.1%, the FAR was 7.1%, and the TS was 69.4%. The FA, POD, and TS values were still considered "satisfactory" when equating these results with accepted values within the forecast community, while the very low FAR is decent, especially when considering the challenge of forecasting localized heavy rain events typically associated with the monsoon period.

Forecast message statement accuracy was 87.3% for all forecast zones over the length of the monsoon. Forecast skill stayed consistently above the excellent 75% threshold for the active months of July (100%), August (92%), and September (84.9%). Of note, an impressive 71.5% of total messages were issued over just 8 days in September. Unlike the limited 29 messages issued during the 2024 monsoon, 2025's 102 message count was much closer to the historical seasonal average around 123 (see Table 7 below). The average lead time for all Message 1 Alerts (M-1) over the length of the season was around 37 minutes, which is an improvement compared to Monsoon 2024's 24-minute average. There were also 17 flood watches (M-2) and 10 flood warning (M-3) related statements issued during the 2025 season, while in 2024 no M-2 or M-3 products were issued.

Verification of Monsoon 2025's 44 Lake Alerts showed an excellent combined accuracy of 88.6%, which was on par with Monsoon 2024's 96.2% overall issuance accuracy also having a similar number of alerts (52). The average lead time for all lakes/reservoirs combined over the length of the season was around 17 minutes, which was nearly identical to last summer's 18 minutes.

When comparing all forecast zones combined over the length of the monsoon, the season's QPF STP accuracy was very good at 83.1% which is an improvement over Monsoon 2024's 65.5%. Overall, there was a forecast bias to underpredict storm total rainfall amounts.

TABLE 7: Historic Monsoon Verification Comparison										
	Outlooks				Messages		Lake Alerts		QPF STP	
Year	AOF	POD	FAR	TS	Events	AOF	Events	AOF	Events	AOF
2012	79.1%	79.6%	8.9%	n/a	102	86.3%	n/a	n/a	n/a	n/a
2013	79.8%	78.7%	6.2%	n/a	137	88.0%	56	89.3%	54	72.2%
2014	77.7%	76.9%	7.1%	67.4%	263	80.2%	57	84.2%	76	72.4%
2015	74.8%	60.3%	2.8%	67.9%	118	75.4%	40	95%	56	82.1%
2016	84.9%	78%	2.6%	77.5%	112	90.2%	46	82.6%	53	88.7%
2017	83.1%	77.9%	1.8%	72.4%	111	86.5%	53	90.6%	67	93.1%
2018	86.1%	82.2%	1.6%	75.6%	129	89.9%	41	82.9%	110	84.5%
2019	90.1%	72.9%	0.7%	80.9%	78	92.3%	18	83.3%	46	80.4%
2020	92.4%	67.1%	0.4%	84.2%	54	92.6%	17	82.4%	36	97.2%
2021	83.0%	85.5%	3.5%	72.5%	219	92.7%	32	87.5%	122	82.8%
2022	79.3%	78.7%	3.5%	71.8%	206	96.6%	47	87.2%	169	92.9%
2023	83.6%	59.0%	1.1%	68.6%	66	83.3%	42	52.4%	57	86.0%
2024	69.6%	63.9%	3.7%	67.3%	29	89.7%	52	96.2%	29	65.5%
2025	74.3%	55.1%	7.1%	69.4%	102	87.3%	44	88.6%	75	82.7%
AVG	81.3%	72.6%	3.6%	73.0%	123.3	87.9%	41.9	84.8%	73.1	83.1%

Table 7 was included to add historical perspective in the verification process. Verification metrics for Outlooks, Messages, Lake Alerts, and QPF STP were included for all previous years. Outlook FA for Monsoon 2025 was below average compared to MSP program history since 2012. The FAR is considered low but was the 2nd highest reported MSP average. The POD ranked 2nd lowest and the aggregate TS metric was the 5th lowest. This monsoon was historically near average resulting in more OSEs, storm/rain days, and MSP message statement products issued compared to the back-to-back dry monsoon in 2023 and 2024. Overall, a forecast bias to underpredict FZ max QPF and daily spatial measurable rain potential affected FZ Outlook accuracy for Monsoon 2025; however, was an improvement compared to Monsoon 2024.

Forecast skill for issued message statements continued to exceed the 75% threshold since record keeping began in the 2012 season. Forecast accuracy for Lake Alerts was 5th highest in MSP’s history. The number of alerts issued for Monsoon 2025 ranked 7th highest. Discussion on improvements of techniques for observing and documenting lightning, heavy rainfall, and wind measurement will continue to assist with the post-event verification process. Finally, the QPF STP skill of 82.7% was near the long-term MSP program average of 83.1%. Qualifying monsoon QPF STP events for Monsoon 2025 were also at historical average.

As a final note, the MSP program introduced several new forecasting metrics for evaluation during Monsoon 2025, such as daily spatial rainfall predictions for each FZ, a second OSE ≥1.25” threshold, and an expanded suite of TS calculations for specific rainfall event type detection (i.e., ≥0.01”, OSE ≥0.50”, OSE ≥1.25”). These new metrics will be considered for continued inclusion in Monsoon 2026’s MSP Verification Report.

When all was said and done, Monsoon 2025 was considered near normal in terms of OSEs and near average for ALERT rainfall, although storm activity was largely biased towards the end of the monsoon when multiple thunderstorm outbreaks impacted portions of Maricopa County. It is hoped that this report will serve as quantifiable tool used to evaluate forecast performance on a year-to-year basis. This report will be continued in subsequent years focusing not only on the present year's statistical data but will also serve as a historical comparison to measure future year's performance.

APPENDIX A: MSP OUTLOOKS – VERIFICATION TABLES

TABLES A-1 – A17: These tables shows the raw verification data of MSP issued precipitation forecasts contained in the daily Outlooks for the 2025 monsoon season. The valid period for rainfall each day is from 12 PM same day through 12 PM the following day. Each table represents a different Forecast Zone (FZ) organized by the following general geographic position in the County: **Tables A 1-6** “Central County” (East Valley, Gila River, Phoenix North, Phoenix South, Scottsdale South, Southeast FZs), **Tables A 7-10** “NE County” (Lower Salt River Lakes, New River/Cave Creek, Scottsdale North, and Superstition FZs), **Tables A 11-14** “NW County” (Northwest Valley, Upper Centennial West Valley, Wickenburg FZs), and **Tables A 15-17** “SW County” (Gila Bend, Palo Verde, Rainbow Valley FZs) The columns from left to right are defined as follows:

QPFMin – Forecast minimum rainfall range (inches) within the Forecast Zone over the period.

QPFMax – Forecast maximum rainfall range (inches) within the Forecast Zone over the period.

LB25%QPF – Calculated 25% reduced QPF minimum value. Used to establish lower bound range threshold of forecast precipitation for verification purposes.

UB25%QPF – Calculated 25% increased QPF maximum value. Used to establish upper bound range threshold of forecast precipitation for verification purposes.

Chance ≥ 0.50 – Qualitative descriptor conveying MSP forecast confidence that a Forecast Zone observes at least 0.50” of rainfall over the period. Descriptors include “Low”, “Moderate”, “High”, or none if left blank. Note, qualitative descriptors are meant to help add forecast context and do not have a specific verification metric.

Chance ≥ 1.50 – Qualitative descriptor conveying MSP forecast confidence that a Forecast Zone observes at least 0.50” of rainfall over the period. Descriptors include “Low”, “Moderate”, “High”, or none if left blank. Note, qualitative descriptors are meant to help add forecast context and do not have a specific verification metric.

Coverage – Qualitative descriptor conveying spatially how much percent area of a Forecast Zone is expected to receive measurable rainfall (≥ 0.01 ”) over the period. Descriptors include “Limited” (<20%), “Scattered” (20% to 50%), “Widespread” (>50%), or none (0%) if left blank.

ALERT – Peak total observed ALERT gage rainfall value (inches) within the Forecast Zone over the period. Note, both ALERT and GAQPE values are used to assess if observed measurable rainfall occurred (≥ 0.01 ”).

GAQPE – Radar rainfall estimate (see [Verification Metrics and Criteria](#) section for more details). Note, both ALERT and GAQPE values are used to assess if observed measurable rainfall occurred (≥ 0.01) in a Forecast Zone.

Obs. Coverage (%) – Observed Forecast Zone spatial coverage of measurable rainfall (≥ 0.01) over the period, as determined by GAQPE.

AOF – Forecast accuracy considering calculated LB and UB 25%QPF threshold ranges, assigned a “h” for a hit, “m” for a miss, “u” for under QPF prediction (UB25%QPF lower than observed rainfall), “o” for over QPF prediction (LB25%QPF greater than observed rainfall), or “fa” for a QPF prediction when no measurable rainfall (≥ 0.01) was observed. Note, using set lower and upper bound calculated QPF threshold for verification purposes allow inclusion of reasonably accurate forecasts when compared to observed rainfall.

POD (≥ 0.50) – Probability of detection for ≥ 0.50 ” events, assigned an “h” for a hit, “m” for a miss, or “-” for non-significant rainfall observed (i.e., < 0.50 ”).

FA (≥ 0.50) – False alarms, assigned an “y”.

POD (≥ 1.25) – Probability of detection for ≥ 1.25 ” events, assigned an “h” for a hit, “m” for a miss, or “-” for non-significant rainfall observed (i.e., < 1.25 ”).

FA (≥ 1.25) – False alarms, assigned an “y”.

AOC – Forecast coverage accuracy, assigned an “h” for a hit, “m” for a miss when no measurable QPF (≥ 0.01) was indicated but measurable rainfall was observed, “u” for under rainfall coverage prediction (e.g., forecast “Limited” and observed was “Scattered”), “o” for over rainfall coverage prediction (e.g., forecast “Widespread” and observed was “Limited”), or “fa” for a rainfall coverage prediction of any extent when no measurable rainfall was observed.

TABLE A-1: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	East Valley Forecast Zone (Central County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
07/02/25	0.50	1.00	0.38	1.25	High	Low	Scattered	0.20	0.68	1.00	h	h	-	-	-	u
07/03/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.08	0.24	0.23	h	-	y	-	-	u
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-1: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/14/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.03	0.00	h	-	-	-	-	h
07/15/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
07/16/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.05	0.00	h	-	-	-	-	h
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
07/21/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.04	0.03	0.00	o	-	y	-	-	o
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.39	0.70	0.32	u	h	-	-	-	u
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.01	0.50	0.01	0.63	0.00	0.00	Limited	0.16	0.55	0.23	h	h	-	-	-	u
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h

TABLE A-1: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/13/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.25	0.02	u	-	-	-	-	h
08/14/25	0.25	0.50	0.19	0.63	Low	0.00	Widespread	1.42	1.11	1.00	u	h	-	m	-	h
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	m	-	-	-	-	m
08/21/25	0.01	0.50	0.01	0.63	Moderate	0.00	Scattered	0.31	0.88	1.00	u	h	-	-	-	u
08/22/25	0.01	0.15	0.01	0.19	0.00	0.00	Scattered	0.00	0.04	0.00	h	-	-	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	m	-	-	-	-	m
08/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.08	1.16	0.13	m	m	-	-	-	m
08/25/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.98	1.35	0.93	u	m	-	m	-	u
08/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.12	0.50	0.20	m	m	-	-	-	m
08/27/25	0.01		0.01	0.00	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.35	0.50	0.56	m	m	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.39	0.68	0.37	u	m	-	-	-	u
09/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.63	1.19	1.00	u	m	-	-	-	u
09/04/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.00	0.22	0.03	h	-	y	-	-	o
09/05/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.08	0.14	0.02	o	-	y	-	y	o
09/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m

TABLE A-1: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025																
Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.24	0.41	0.36	u	-	-	-	-	u
09/18/25	0.25	1.00	0.19	1.25	Moderate	Low	Scattered	0.24	0.51	0.22	h	h	-	-	-	h
09/19/25	0.25	1.00	0.19	1.25	Moderate	0.00	Scattered	0.00	0.00	0.00	fa	-	y	-	-	fa
09/20/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.09	m	-	-	-	-	m
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.24	0.29	0.32	h	-	-	-	-	u
09/26/25	1.00	2.00	0.75	2.50	High	High	Widespread	2.52	2.92	1.00	u	h	-	h	-	h
09/27/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.55	0.73	0.61	u	m	-	-	-	u
09/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-2: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025																
Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Gila River Forecast Zone (Central County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-2: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.13	0.04	h	-	-	-	-	h
07/02/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.23	0.62	1.00	h	h	-	-	y	h
07/03/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.15	1.47	0.76	u	h	-	m	-	u
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
07/15/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.30	0.10	h	-	y	-	-	h
07/16/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.21	0.14	u	-	-	-	-	h
07/17/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.19	0.04	u	-	-	-	-	h
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.04	m	-	-	-	-	m

TABLE A-2: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/21/25	0.25	1.00	0.19	1.25	Moderate	Low	Scattered	0.00	0.04	0.00	o	-	y	-	-	o
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.54	0.30	h	h	-	-	-	u
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/31/25	0.01	0.50	0.01	0.63	0.00	0.00	Limited	0.00	0.21	0.01	h	-	y	-	-	h
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.26	m	-	-	-	-	m
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/13/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	1.56	0.15	u	m	-	m	-	h
08/14/25	0.25	0.50	0.19	0.63	Moderate	0.00	Widespread	0.90	2.64	1.00	u	h	-	m	-	h
08/15/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.00	0.27	0.06	h	-	y	-	-	o
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	m	-	-	-	-	m
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-2: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/21/25	0.01	0.50	0.01	0.63	Moderate	0.00	Scattered	0.43	0.55	0.75	h	h	-	-	-	u
08/22/25	0.01	0.25	0.01	0.31	0.00	0.00	Scattered	0.00	0.01	0.00	h	-	-	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.07	0.99	0.26	m	m	-	-	-	m
08/25/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.70	1.32	1.00	u	h	-	m	-	u
08/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.03	0.29	0.18	m	-	-	-	-	m
08/27/25	0.10	0.25	0.08	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.03	m	-	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.23	1.09	0.85	u	m	-	-	-	u
09/02/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.03	0.00	h	-	-	-	-	h
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.86	1.32	1.00	u	m	-	m	-	u
09/04/25	0.50	1.00	0.38	1.25	Moderate	0.00	Widespread	0.00	0.22	0.03	o	-	y	-	-	o
09/05/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.00	0.01	0.00	o	-	y	-	y	o
09/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.17	0.03	h	-	-	-	-	h
09/18/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.00	0.13	0.10	h	-	y	-	-	o

TABLE A-2: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/19/25	0.25	1.00	0.19	1.25	Moderate	0.00	Scattered	0.00	0.33	0.08	h	-	y	-	-	o
09/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
09/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.03	0.32	0.38	u	-	-	-	-	u
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.34	0.22	u	-	-	-	-	u
09/26/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	0.35	1.68	1.00	u	h	-	m	-	u
09/27/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.03	1.75	0.69	u	m	-	m	-	u
09/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-3: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Phoenix North Forecast Zone (Central County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-3: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.06	0.01	h	-	-	-	-	h
07/02/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.31	0.43	1.00	h	-	y	-	-	u
07/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.12	0.52	0.43	u	m	-	-	-	u
07/16/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.04	0.00	h	-	-	-	-	h
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.30	m	-	-	-	-	m
07/21/25	0.25	0.75	0.19	0.94	Moderate	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.33	0.04	h	-	y	-	-	h
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-3: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.17	0.04	h	-	-	-	-	h
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.02	m	-	-	-	-	m
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
08/13/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.24	0.89	0.46	u	m	-	-	-	u
08/14/25	0.01	0.25	0.01	0.31	Moderate	0.00	Scattered	1.97	3.08	0.98	u	m	-	m	-	u
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	h	-	-	-	-	-
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
08/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.59	0.98	0.70	u	m	-	-	-	u
08/22/25	0.01	0.15	0.01	0.19	0.00	0.00	Scattered	0.00	0.28	0.05	h	-	-	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/24/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.04	0.22	0.13	u	-	-	-	-	h
08/25/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.55	0.77	1.00	u	h	-	-	-	u
08/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	1.06	1.50	0.90	u	m	-	m	-	u

TABLE A-3: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/27/25	0.01		0.01	0.01	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.08	0.18	0.13	m	-	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.08	0.30	0.20	h	-	-	-	-	u
09/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	1.42	1.72	1.00	u	m	-	m	-	u
09/04/25	0.50	1.25	0.38	1.56	Moderate	Low	Widespread	0.00	0.05	0.00	o	-	y	-	y	o
09/05/25	0.75	1.50	0.56	1.88	High	Low	Widespread	0.00	0.03	0.00	o	-	y	-	y	o
09/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.20	0.32	0.52	m	-	-	-	-	u
09/18/25	0.25	1.00	0.19	1.25	Moderate	Low	Scattered	1.38	1.93	0.97	u	h	-	m	-	u
09/19/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.12	0.24	0.03	h	-	y	-	-	h
09/20/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/21/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.43	0.88	0.40	u	m	-	-	-	u
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	h	-	-	-	-	-
09/25/25	0.00		0.00	0.00	0.00	0.00	0.00	1.02	1.31	1.00	m	m	-	m	-	m

TABLE A-3: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/26/25	1.00	2.00	0.75	2.50	High	High	Widespread	1.57	1.72	1.00	h	h	-	h	-	h
09/27/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.83	1.12	0.89	u	h	-	-	-	u
09/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-4: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Phoenix South Forecast Zone (Central County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
07/02/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.20	0.26	1.00	o	-	y	-	y	h
07/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.08	0.17	0.05	h	-	-	-	-	h
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-4: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.08	0.31	0.17	h	-	-	-	-	h
07/16/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.12	0.04	h	-	-	-	-	h
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.10	m	-	-	-	-	m
07/21/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.00	0.01	0.00	m	-	y	-	-	o
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.28	0.62	0.18	h	h	-	-	-	h
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
07/31/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.28	0.14	h	-	-	-	-	h
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-4: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.07	m	-	-	-	-	m
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	m	-	-	-	-	m
08/13/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.94	1.81	0.55	u	m	-	m	-	u
08/14/25	0.01	0.25	0.01	0.31	Moderate	0.00	Scattered	0.43	0.64	0.96	u	m	-	-	-	u
08/15/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.00	0.00	0.00	fa	-	y	-	-	fa
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
08/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.59	0.97	0.98	u	m	-	-	-	u
08/22/25	0.01	0.15	0.01	0.19	0.00	0.00	Scattered	0.04	0.18	0.02	h	-	-	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.55	0.77	0.16	m	-	-	-	-	m
08/25/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	1.54	1.25	1.00	u	h	-	m	-	u
08/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.94	1.11	0.69	u	m	-	-	-	u
08/27/25	0.10	0.25	0.08	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.20	0.27	0.19	m	-	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.24	0.66	0.66	u	m	-	-	-	u
09/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m

TABLE A-4: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	1.26	1.54	1.00	u	m	-	m	-	u
09/04/25	0.50	1.25	0.38	1.56	High	Low	Widespread	0.04	0.81	0.03	h	h	-	-	y	o
09/05/25	0.50	1.25	0.38	1.56	High	Low	Widespread	0.00	1.60	0.06	h	h	-	h	-	o
09/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	m	-	-	-	-	m
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.20	0.44	0.10	u	-	-	-	-	h
09/18/25	0.25	1.00	0.19	1.25	Moderate	Low	Scattered	0.43	0.58	0.38	h	h	-	-	-	h
09/19/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
09/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.08	0.00	0.00	h	-	-	-	-	-
09/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.43	0.41	0.30	m	-	-	-	-	m
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	1.06	1.50	0.62	u	m	-	m	-	u
09/26/25	0.50	1.00	0.38	1.25	Moderate	High	Scattered	2.56	2.54	1.00	u	h	-	h	-	u
09/27/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.83	1.33	0.43	u	m	-	m	-	u
09/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-5: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Scottsdale South Forecast Zone (Central County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
07/02/25	0.25	0.75	0.19	0.94	Low	0.00	Limited	0.20	0.23	0.99	h	-	y	-	-	u
07/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.31	0.25	0.54	h	-	-	-	-	u
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-5: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
07/16/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	m	-	-	-	-	m
07/21/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.00	0.02	0.00	o	-	y	-	-	o
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.10	0.02	o	-	y	-	-	h
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.10	0.06	h	-	-	-	-	h
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-5: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/13/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.18	0.01	u	-	-	-	-	h
08/14/25	0.01	0.25	0.01	0.31	Moderate	0.00	Widespread	1.10	3.52	0.99	u	m	-	m	-	h
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
08/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.24	0.38	0.98	u	-	-	-	-	u
08/22/25	0.01	0.15	0.01	0.19	0.00	0.00	Scattered	0.00	0.02	0.00	h	-	-	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.20	0.77	0.14	m	m	-	-	-	m
08/25/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.71	0.98	0.98	u	h	-	-	-	u
08/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.47	0.62	0.57	m	m	-	-	-	m
08/27/25	0.01		0.01	0.01	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.12	0.33	0.60	m	-	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.24	1.28	0.60	u	m	-	m	-	u
09/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	1.34	1.01	0.99	u	m	-	-	-	u
09/04/25	0.25	0.75	0.19	0.94	Low	0.00	Scattered	0.00	0.03	0.00	o	-	y	-	-	o
09/05/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.08	0.16	0.04	o	-	y	-	y	o
09/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-5: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025																
Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.31	0.24	0.37	h	-	-	-	-	u
09/18/25	0.25	1.00	0.19	1.25	Moderate	Low	Scattered	0.43	0.55	0.73	h	h	-	-	-	u
09/19/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
09/20/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
09/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.01	m	-	-	-	-	m
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.28	0.84	0.59	u	m	-	-	-	u
09/26/25	1.00	2.00	0.75	2.50	High	High	Widespread	2.83	3.66	0.99	u	h	-	h	-	h
09/27/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.87	1.25	0.31	u	m	-	m	-	u
09/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-6: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025																
Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Southeast Valley Forecast Zone (Central County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-6: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.19	m	-	-	-	-	m
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.25	0.04	h	-	-	-	-	h
07/02/25	0.50	1.00	0.38	1.25	High	Low	Scattered	0.91	1.41	1.00	u	h	-	m	-	u
07/03/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.20	0.08	h	m	-	-	-	h
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.03	0.00	h	-	-	-	-	h
07/15/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
07/16/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.05	0.00	h	-	-	-	-	h
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m

TABLE A-6: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/21/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.00	0.23	0.08	h	-	y	-	-	o
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.04	0.32	0.18	h	-	y	-	-	h
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.12	0.18	0.02	h	-	-	-	-	h
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/13/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
08/14/25	0.25	0.75	0.19	0.94	Moderate	0.00	Widespread	1.42	2.02	1.00	u	h	-	m	-	h
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-6: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	h	-	-	-	-	-
08/21/25	0.01	0.50	0.01	0.63	Moderate	0.00	Scattered	0.24	0.49	0.98	h	-	y	-	-	u
08/22/25	0.01	0.25	0.01	0.31	0.00	0.00	Scattered	0.00	0.04	0.00	h	-	-	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
08/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.06	m	m	-	-	-	m
08/25/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.98	1.30	0.97	u	m	-	m	-	u
08/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	m	-	-	-	-	m
08/27/25	0.01		0.01	0.00	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.31	0.45	0.92	m	-	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.63	0.94	0.83	u	m	-	-	-	u
09/02/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.55	0.68	1.00	u	m	-	-	-	u
09/04/25	0.25	0.75	0.19	0.94	Low	0.00	Scattered	0.12	0.18	0.13	o	-	y	-	-	o
09/05/25	0.50	1.25	0.38	1.56	High	Low	Scattered	0.00	0.02	0.00	o	-	y	-	y	o
09/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
09/17/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.08	0.30	0.08	h	-	-	-	-	h
09/18/25	0.25	1.00	0.19	1.25	Moderate	Low	Scattered	0.04	0.43	0.06	h	-	y	-	-	o

TABLE A-6: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/19/25	0.25	1.00	0.19	1.25	Moderate	0.00	Scattered	0.00	0.01	0.00	o	-	y	-	-	o
09/20/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
09/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.04	m	-	-	-	-	m
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.12	0.01	h	-	-	-	-	h
09/26/25	1.00	2.00	0.75	2.50	High	High	Widespread	1.57	1.83	1.00	h	h	-	h	-	h
09/27/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.35	1.12	0.94	h	m	-	-	-	u
09/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-7: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Lower Salt River Lakes Forecast Zone (NE County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-7: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.25	0.50	0.19	0.63	Low	0.00	Scattered	0.00	0.81	0.32	u	h	-	-	-	h
07/02/25	0.50	0.75	0.38	0.94	Moderate	0.00	Widespread	0.31	2.02	0.57	u	h	-	m	-	h
07/03/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.40	0.36	h	m	-	-	-	u
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.03	0.00	h	-	-	-	-	h
07/15/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.00	0.05	0.00	o	-	y	-	-	o
07/16/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
07/19/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.04	0.00	h	-	-	-	-	h
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/21/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.55	0.15	0.31	h	h	-	-	-	u
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.13	0.29	h	-	y	-	-	u
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-7: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.03	0.00	h	-	y	-	-	h
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
08/13/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.14	0.03	h	-	-	-	-	h
08/14/25	0.25	0.75	0.19	0.94	Moderate	Low	Scattered	0.59	0.84	1.00	h	h	-	-	-	u
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.08	0.18	0.37	h	-	-	-	-	u
08/21/25	0.01	0.50	0.01	0.63	Moderate	0.00	Scattered	0.28	1.30	1.00	h	h	-	m	-	u
08/22/25	0.10	0.50	0.08	0.63	Moderate	0.00	Widespread	0.00	0.04	0.00	o	-	y	-	-	o
08/23/25	0.01	0.20	0.01	0.25	0.00	0.00	Scattered	0.00	0.00	0.00	h	-	-	-	-	-
08/24/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.73	0.44	u	-	y	-	-	u
08/25/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.04	0.26	0.70	h	-	-	-	-	u
08/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m

TABLE A-7: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/27/25	0.10	0.50	0.08	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.24	0.56	1.00	m	m	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.50	0.01	0.63	0.00	0.00	Limited	0.24	0.83	0.96	u	h	-	-	-	u
09/02/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.80	0.41	u	m	-	-	-	u
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.28	1.11	0.72	u	m	-	-	-	u
09/04/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	0.00	0.00	0.00	h	-	-	-	-	-
09/05/25	0.50	1.25	0.38	1.56	High	Moderate	Widespread	0.00	0.62	0.32	h	h	-	-	y	o
09/06/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/11/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.25	0.25	h	-	-	-	-	u
09/12/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.25	0.75	0.19	0.94	Moderate	0.00	Limited	0.00	0.11	0.01	o	-	y	-	-	h
09/18/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.12	0.23	0.39	o	-	y	-	y	o
09/19/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	0.00	0.00	0.00	fa	-	y	-	-	fa
09/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.08	0.17	h	-	-	-	-	h
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.47	0.62	0.88	h	h	-	-	-	u

TABLE A-7: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/26/25	1.00	3.00	0.75	3.75	High	High	Widespread	1.42	3.05	1.00	h	h	-	h	-	h
09/27/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.20	1.56	1.00	u	h	-	m	-	u
09/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-8: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	New River/Cave Creek Forecast Zone (NE County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Scattered	0.00	0.00	0.02	h	-	-	-	-	-
07/02/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	0.31	0.94	1.00	h	h	-	-	-	u
07/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-8: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.31	0.61	0.44	u	m	-	-	-	u
07/16/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.04	0.25	0.06	h	-	y	-	-	u
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/19/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.82	m	-	-	-	-	m
07/21/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.00	0.01	0.00	o	-	y	-	-	o
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	m	-	-	-	-	m
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-8: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
08/13/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.08	0.71	0.23	u	h	-	-	-	u
08/14/25	0.25	0.75	0.19	0.94	Moderate	Low	Scattered	1.46	1.47	1.00	u	h	-	m	-	u
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	m	-	-	-	-	m
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.14	0.18	u	-	-	-	-	h
08/21/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.08	0.14	0.08	h	-	y	-	-	h
08/22/25	0.01	0.50	0.01	0.63	Moderate	0.00	Widespread	0.16	0.41	0.28	h	-	y	-	-	o
08/23/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/24/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.35	1.78	0.67	u	m	-	m	-	u
08/25/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.71	0.78	0.94	h	h	-	-	-	u
08/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.31	0.94	0.51	u	m	-	-	-	u
08/27/25	0.25	0.50	0.19	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	m	-	-	-	fa
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.12	0.28	0.44	m	-	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.50	0.01	0.63	0.00	0.00	Limited	0.51	1.01	0.53	u	h	-	-	-	u
09/02/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa

TABLE A-8: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.59	1.06	0.65	u	m	-	-	-	u
09/04/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.04	0.55	0.14	h	h	-	-	-	o
09/05/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.00	0.14	0.02	o	-	y	-	y	o
09/06/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.38	0.03	h	-	y	-	-	h
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.08	0.31	0.01	m	-	-	-	-	m
09/08/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.10	0.50	0.08	0.63	Low	0.00	Limited	0.04	0.30	0.82	h	-	y	-	-	u
09/18/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	1.85	2.10	1.00	u	h	-	h	-	h
09/19/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.12	0.14	0.01	o	-	y	-	y	o
09/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.03	0.00	h	-	-	-	-	h
09/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	1.38	1.88	1.00	u	m	-	m	-	u
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.16	0.14	0.19	m	-	-	-	-	m
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
09/25/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	1.06	1.66	1.00	u	m	-	m	-	u
09/26/25	1.00	3.00	0.75	3.75	High	High	Widespread	0.71	0.97	1.00	h	h	-	-	y	h
09/27/25	0.50	1.25	0.38	1.56	High	Low	Scattered	0.71	0.80	0.94	h	h	-	m	-	u
09/28/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.02	0.00	h	-	-	-	-	h
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-9: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Scottsdale North Forecast Zone (NE County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Scattered	0.00	0.07	0.00	h	-	-	-	-	o
07/02/25	0.25	0.75	0.19	0.94	Low	0.00	Scattered	0.00	0.53	0.95	h	h	-	-	-	u
07/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.16	0.10	h	-	-	-	-	h
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-9: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.11	0.01	h	-	-	-	-	h
07/16/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.01	0.03	h	-	-	-	-	h
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.09	m	-	-	-	-	m
07/21/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.00	0.01	0.00	o	-	y	-	-	o
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.05	0.00	o	-	y	-	-	h
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
07/31/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m

TABLE A-9: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/13/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.05	0.00	h	-	-	-	-	h
08/14/25	0.25	0.75	0.19	0.94	Moderate	Low	Scattered	0.00	1.60	0.97	u	h	-	m	-	u
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	m	-	-	-	-	m
08/21/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.23	0.92	h	-	y	-	-	u
08/22/25	0.01	0.50	0.01	0.63	Low	0.00	Widespread	0.00	0.31	0.05	h	-	y	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.44	m	m	-	-	-	m
08/25/25	0.25	0.75	0.19	0.94	Moderate	0.00	Limited	0.00	0.49	0.65	h	-	y	-	-	u
08/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.47	m	-	-	-	-	m
08/27/25	0.01		0.01	0.01	0.00	0.00	Limited	0.00	0.01	0.09	h	-	-	-	-	h
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.69	m	m	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.74	0.64	u	m	-	-	-	u
09/02/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.66	0.97	u	m	-	-	-	u
09/04/25	0.25	0.75	0.19	0.94	Low	0.00	Scattered	0.00	0.43	0.09	h	-	y	-	-	o
09/05/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.00	0.15	0.03	o	-	y	-	y	o
09/06/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.05	0.00	h	-	-	-	-	h
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.30	0.38	h	-	-	-	-	u
09/18/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.00	2.30	0.95	u	h	-	h	-	u
09/19/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	0.00	0.50	0.18	h	h	-	-	-	o
09/20/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.46	0.27	u	-	-	-	-	u
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	m	-	-	-	-	m
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.94	0.86	u	m	-	-	-	u
09/26/25	1.00	2.00	0.75	2.50	High	High	Widespread	3.58	3.92	0.97	u	h	-	h	-	h
09/27/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.00	0.80	0.73	u	h	-	-	-	u
09/28/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Superstition Forecast Zone (NE County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-10: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Scattered	0.00	0.07	0.00	h	-	-	-	-	o
07/02/25	0.25	0.75	0.19	0.94	Low	0.00	Scattered	0.00	0.53	0.95	h	h	-	-	-	u
07/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.16	0.10	h	-	-	-	-	h
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.11	0.01	h	-	-	-	-	h
07/16/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.01	0.03	h	-	-	-	-	h
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.09	m	-	-	-	-	m

TABLE A-10: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/21/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.00	0.01	0.00	o	-	y	-	-	o
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.05	0.00	o	-	y	-	-	h
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
07/31/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/13/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.05	0.00	h	-	-	-	-	h
08/14/25	0.25	0.75	0.19	0.94	Moderate	Low	Scattered	0.00	1.60	0.97	u	h	-	m	-	u
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-10: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	m	-	-	-	-	m
08/21/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.23	0.92	h	-	y	-	-	u
08/22/25	0.01	0.50	0.01	0.63	Low	0.00	Widespread	0.00	0.31	0.05	h	-	y	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.44	m	m	-	-	-	m
08/25/25	0.25	0.75	0.19	0.94	Moderate	0.00	Limited	0.00	0.49	0.65	h	-	y	-	-	u
08/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.47	m	-	-	-	-	m
08/27/25	0.01		0.01	0.01	0.00	0.00	Limited	0.00	0.01	0.09	h	-	-	-	-	h
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.69	m	m	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.74	0.64	u	m	-	-	-	u
09/02/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.66	0.97	u	m	-	-	-	u
09/04/25	0.25	0.75	0.19	0.94	Low	0.00	Scattered	0.00	0.43	0.09	h	-	y	-	-	o
09/05/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.00	0.15	0.03	o	-	y	-	y	o
09/06/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.05	0.00	h	-	-	-	-	h
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.30	0.38	h	-	-	-	-	u
09/18/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.00	2.30	0.95	u	h	-	h	-	u

TABLE A-10: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/19/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	0.00	0.50	0.18	h	h	-	-	-	o
09/20/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.46	0.27	u	-	-	-	-	u
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	m	-	-	-	-	m
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.94	0.86	u	m	-	-	-	u
09/26/25	1.00	2.00	0.75	2.50	High	High	Widespread	3.58	3.92	0.97	u	h	-	h	-	h
09/27/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.00	0.80	0.73	u	h	-	-	-	u
09/28/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-11: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Northwest Valley Forecast Zone (NW County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-11: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
07/02/25	0.75	1.25	0.56	1.56	High	Low	Scattered	0.51	1.43	1.00	h	h	-	h	-	u
07/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.51	0.40	u	m	-	-	-	u
07/16/25	0.50	1.25	0.38	1.56	Moderate	Low	Widespread	0.04	0.16	0.13	o	-	y	-	y	o
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.13	m	-	-	-	-	m
07/21/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
07/22/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-11: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	m	-	-	-	-	m
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
08/13/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.04	0.22	0.11	h	-	-	-	-	h
08/14/25	0.01	0.10	0.01	0.13	0.00	0.00	Scattered	0.63	2.00	0.30	u	m	-	m	-	h
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	m	-	-	-	-	m
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
08/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.08	0.20	0.21	h	-	-	-	-	u
08/22/25	0.01	0.50	0.01	0.63	Low	0.00	Widespread	0.00	0.20	0.21	h	-	y	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/24/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.39	0.62	0.56	u	m	-	-	-	u
08/25/25	0.25	0.75	0.19	0.94	Low	0.00	Scattered	0.19	0.47	1.00	h	-	y	-	-	u
08/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.03	0.17	0.03	h	-	-	-	-	h

TABLE A-11: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/27/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.30	0.06	h	-	-	-	-	h
09/02/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.06	0.00	h	-	-	-	-	h
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.98	1.89	1.00	u	m	-	m	-	u
09/04/25	0.50	1.00	0.38	1.25	Moderate	0.00	Widespread	0.00	0.57	0.02	h	h	-	-	-	o
09/05/25	0.50	1.25	0.38	1.56	High	Moderate	Widespread	0.00	0.02	0.00	o	-	y	-	y	o
09/06/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.01	0.00	h	-	y	-	-	h
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.01	m	-	-	-	-	m
09/08/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.51	0.59	0.73	h	h	-	-	-	u
09/18/25	0.25	1.00	0.19	1.25	Moderate	Low	Scattered	0.51	0.77	0.88	h	h	-	-	-	u
09/19/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/20/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.14	0.01	u	-	-	-	-	h
09/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.62	1.10	1.00	m	m	-	-	-	m
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.00		0.00	0.00	0.00	0.00	0.00	1.50	1.75	0.82	m	m	-	m	-	m

TABLE A-11: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/26/25	0.25	1.00	0.19	1.25	Moderate	0.00	Scattered	1.41	1.52	1.00	u	h	-	m	-	u
09/27/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.04	0.71	0.44	h	h	-	-	-	h
09/28/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.05	0.00	h	-	-	-	-	h
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-12: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Upper Centennial Forecast Zone (NW County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.34	0.55	u	-	-	-	-	u
07/02/25	0.10	0.50	0.08	0.63	Low	0.00	Limited	0.67	0.50	0.16	o	h	-	-	-	h
07/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-12: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
07/16/25	0.50	1.25	0.38	1.56	Moderate	Low	Widespread	0.39	1.01	1.00	h	h	-	-	y	h
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/18/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.03	0.00	h	-	y	-	-	h
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	m	-	-	-	-	m
07/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
07/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-12: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/13/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.39	0.95	0.15	u	h	-	-	-	h
08/14/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.12	0.54	0.12	u	m	-	-	-	h
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.39	0.66	0.63	m	m	-	-	-	m
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.25	0.05	h	-	-	-	-	h
08/22/25	0.01	0.50	0.01	0.63	Moderate	0.00	Widespread	0.08	0.32	0.38	h	-	y	-	-	o
08/23/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
08/24/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.43	0.89	0.81	h	h	-	-	-	u
08/25/25	0.50	1.25	0.38	1.56	High	Low	Widespread	2.64	1.92	1.00	u	h	-	h	-	h
08/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.75	1.88	0.66	u	m	-	m	-	u
08/27/25	0.50	1.00	0.38	1.25	Moderate	0.00	Limited	0.00	1.17	0.04	h	h	-	-	-	h
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
09/02/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.01	0.00	h	-	y	-	-	h

TABLE A-12: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	1.54	2.07	0.48	u	m	-	m	-	u
09/04/25	0.50	1.25	0.38	1.56	High	Low	Widespread	0.43	1.35	0.81	h	h	-	h	-	h
09/05/25	0.50	1.25	0.38	1.56	High	Moderate	Widespread	0.28	1.14	0.37	h	h	-	-	y	o
09/06/25	0.01	0.50	0.01	0.63	Moderate	0.00	Limited	0.35	1.87	0.21	u	h	-	m	-	u
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.08	1.05	0.18	m	m	-	-	-	m
09/08/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.50	1.00	0.38	1.25	Moderate	0.00	Limited	0.43	0.35	1.00	h	-	y	-	-	u
09/18/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.47	0.53	0.61	h	h	-	-	y	u
09/19/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	0.00	0.00	0.00	fa	-	y	-	-	fa
09/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.50	0.12	u	m	-	-	-	h
09/21/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	1.14	1.20	1.00	u	h	-	-	-	u
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
09/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.35	0.49	0.57	u	-	-	-	-	u
09/27/25	0.50	1.50	0.38	1.88	High	Moderate	Widespread	0.63	1.04	0.98	h	h	-	-	y	h
09/28/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.12	1.47	0.42	u	h	-	m	-	h
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-13: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	West Valley Forecast Zone (NW County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
07/02/25	0.75	1.50	0.56	1.88	High	Moderate	Limited	1.22	1.95	1.00	u	h	-	h	-	u
07/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.13	0.01	h	-	-	-	-	h
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	m	-	-	-	-	m
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-13: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.08	0.40	0.21	u	-	-	-	-	u
07/16/25	0.50	1.25	0.38	1.56	Moderate	Low	Widespread	0.11	0.26	0.31	o	-	y	-	y	o
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.27	m	-	-	-	-	m
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.18	m	-	-	-	-	m
07/21/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.03	0.00	h	-	y	-	-	h
07/22/25	0.01	0.75	0.01	0.94	Low	0.00	Limited	0.08	0.38	0.03	h	-	y	-	-	h
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.07	m	-	-	-	-	m
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.01	m	-	-	-	-	m

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Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/13/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.66	1.15	0.02	u	m	-	-	-	h
08/14/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.19	1.29	0.24	u	m	-	m	-	u
08/15/25	0.25	0.75	0.19	0.94	Low	0.00	Limited	0.07	0.71	0.05	h	h	-	-	-	h
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m
08/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.11	0.53	0.32	u	m	-	-	-	u
08/22/25	0.01	0.50	0.01	0.63	Low	0.00	Widespread	0.00	0.16	0.03	h	-	y	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/24/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.20	0.09	h	-	y	-	-	h
08/25/25	0.25	0.75	0.19	0.94	Low	0.00	Scattered	0.70	1.76	1.00	u	h	-	m	-	u
08/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.78	1.13	0.23	u	m	-	-	-	u
08/27/25	0.10	0.25	0.08	0.31	0.00	0.00	Limited	0.00	0.08	0.00	h	-	-	-	-	h
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.03	0.26	0.04	m	-	-	-	-	m
09/02/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.04	0.00	h	-	-	-	-	h
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.98	1.34	0.98	m	m	-	m	-	u
09/04/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.23	1.90	0.14	u	h	-	h	-	o
09/05/25	0.50	1.25	0.38	1.56	High	Moderate	Widespread	0.00	1.60	0.04	u	h	-	h	-	o
09/06/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-13: MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.19	0.32	0.11	h	-	y	-	-	h
09/18/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.59	0.98	0.66	u	h	-	-	-	u
09/19/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	m	-	-	-	-	fa
09/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	m	-	-	-	-	fa
09/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.23	0.48	0.65	m	-	-	-	-	m
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.00		0.00	0.00	0.00	0.00	0.00	1.06	1.75	0.59	m	m	-	m	-	m
09/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	1.49	1.50	0.85	u	m	-	m	-	u
09/27/25	0.01	0.50	0.01	0.63	Moderate	0.00	Scattered	0.51	0.98	0.49	u	h	-	-	-	h
09/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-14 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Wickenburg Forecast Zone (NW County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-14 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.07	0.02	h	-	-	-	-	h
07/02/25	0.50	1.00	0.38	1.25	High	0.00	Scattered	0.12	0.20	0.39	o	-	y	-	-	h
07/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
07/16/25	0.50	1.25	0.38	1.56	Moderate	Low	Widespread	0.24	0.48	0.79	h	-	y	-	y	h
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/18/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
07/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	m	-	-	-	-	m

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Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/21/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
07/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/13/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.25	0.03	h	-	y	-	-	h
08/14/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.04	0.00	h	-	-	-	-	h
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-14 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.16	0.36	0.42	u	-	-	-	-	u
08/22/25	0.01	0.50	0.01	0.63	Moderate	0.00	Widespread	0.00	0.19	0.15	h	-	y	-	-	o
08/23/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/24/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.20	0.82	0.96	u	h	-	-	-	u
08/25/25	0.50	1.25	0.38	1.56	High	Low	Widespread	0.47	0.80	0.84	h	h	-	-	y	h
08/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.24	0.39	0.59	u	-	-	-	-	u
08/27/25	0.25	0.50	0.19	0.63	Low	0.00	Limited	0.00	0.01	0.00	o	-	y	-	-	h
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
09/02/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.04	0.00	o	-	y	-	-	h
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.55	1.62	0.86	u	m	-	m	-	u
09/04/25	0.25	0.75	0.19	0.94	Low	0.00	Scattered	0.08	0.47	0.14	h	-	y	-	-	o
09/05/25	0.50	1.25	0.38	1.56	High	Moderate	Widespread	0.04	0.15	0.10	o	-	y	-	y	o
09/06/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.39	1.53	0.26	u	m	-	m	-	u
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	1.38	0.23	m	m	-	m	-	m
09/08/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.35	0.33	1.00	h	-	y	-	-	u
09/18/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.20	0.41	0.43	h	-	y	-	y	h

TABLE A-14 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025																
Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/19/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	0.00	0.00	0.00	fa	-	y	-	-	fa
09/20/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.20	0.48	0.81	u	-	-	-	-	u
09/21/25	0.01	0.35	0.01	0.44	0.00	0.00	Scattered	0.94	1.20	1.00	u	m	-	-	-	u
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.67	0.61	0.21	m	m	-	-	-	m
09/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.35	0.60	0.74	u	m	-	-	-	u
09/27/25	0.50	1.50	0.38	1.88	High	Moderate	Widespread	0.51	0.74	1.00	h	h	-	-	y	h
09/28/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.00	0.01	0.00	h	-	y	-	-	o
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-15 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025																
Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Gila Bend Forecast Zone (SW County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-15 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.03	0.57	0.20	u	m	-	-	-	o
07/02/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.03	3.78	0.66	u	h	-	h	-	h
07/03/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.51	0.33	h	h	-	-	-	u
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.25	0.75	0.19	0.94	Low	0.00	Scattered	0.19	0.23	0.42	h	-	y	-	-	h
07/16/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.03	0.31	0.41	h	-	y	-	-	h
07/17/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.15	0.74	0.54	u	m	-	-	-	u
07/18/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.21	0.04	h	-	y	-	-	h
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
07/20/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.00	0.04	0.00	h	-	y	-	-	o
07/21/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.04	0.30	0.15	o	-	y	-	y	o
07/22/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.43	0.71	0.54	h	h	-	-	-	u
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-15 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	1.14	0.40	u	h	-	-	-	u
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.50	m	-	-	-	-	m
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/13/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.55	0.11	h	h	-	-	-	h
08/14/25	0.50	1.00	0.38	1.25	High	Low	Scattered	0.00	0.87	0.43	h	h	-	-	-	h
08/15/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.43	2.00	1.00	u	h	-	m	-	u
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	m	-	-	-	-	m
08/17/25	0.01	0.35	0.01	0.44	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/21/25	0.01	0.50	0.01	0.63	Moderate	0.00	Limited	0.23	1.16	0.75	u	h	-	-	-	u
08/22/25	0.01	0.25	0.01	0.31	0.00	0.00	Scattered	0.00	0.00	0.00	fa	-	-	-	-	fa
08/23/25	0.01	0.50	0.01	0.63	Low	0.00	Scattered	0.00	0.40	0.07	h	-	y	-	-	o
08/24/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.11	1.44	0.96	u	h	-	m	-	u
08/25/25	0.50	1.25	0.38	1.56	High	Moderate	Widespread	0.35	0.22	0.51	o	-	y	-	y	h
08/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.03	1.51	0.32	u	m	-	m	-	u

TABLE A-15 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/27/25	0.50	1.00	0.38	1.25	Moderate	0.00	Limited	0.00	0.52	0.41	h	h	-	-	-	u
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.23	m	-	-	-	-	m
09/02/25	0.75	1.50	0.56	1.88	Moderate	Moderate	Scattered	0.31	1.09	1.00	h	h	-	-	y	u
09/03/25	0.50	1.00	0.38	1.25	Moderate	0.00	Limited	0.31	1.51	0.30	u	h	-	m	-	u
09/04/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.03	1.86	0.64	h	h	-	h	-	h
09/05/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.00	0.28	0.02	o	-	y	-	y	o
09/06/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.63	0.29	h	h	-	-	-	u
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.15	m	m	-	-	-	m
09/08/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
09/17/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.00	0.07	0.00	o	-	y	-	y	o
09/18/25	0.25	1.00	0.19	1.25	Moderate	Low	Limited	0.70	0.88	0.52	h	h	-	-	-	u
09/19/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	0.00	0.51	0.45	h	h	-	-	-	h
09/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.02	0.00	h	-	-	-	-	h
09/21/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.95	0.63	u	h	-	-	-	u
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m

TABLE A-15 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025																
Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.45	0.19	u	-	-	-	-	h
09/27/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.03	0.43	0.12	h	-	y	-	-	h
09/28/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.02	0.00	h	-	-	-	-	h
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-16 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025																
Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
	Palo Verde Forecast Zone (SW County)										Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.23	0.45	0.51	u	-	-	-	-	u
07/02/25	0.10	0.50	0.08	0.63	Low	0.00	Limited	0.94	0.86	0.75	u	h	-	-	-	u
07/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.02	m	-	-	-	-	m
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-16 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.00	0.00	h	-	-	-	-	-
07/16/25	0.50	1.25	0.38	1.56	Moderate	Low	Widespread	1.10	2.22	1.00	u	h	-	h	-	h
07/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.20	m	m	-	-	-	m
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Scattered	0.00	0.01	0.00	h	-	-	-	-	o
07/21/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.00	0.00	fa	-	y	-	-	fa
07/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-16 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	m	-	-	-	-	m
08/13/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.16	0.06	h	-	y	-	-	h
08/14/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.38	0.02	u	-	-	-	-	h
08/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.07	0.43	0.24	m	-	-	-	-	m
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/21/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.03	0.41	0.01	u	-	-	-	-	h
08/22/25	0.01	0.25	0.01	0.31	0.00	0.00	Widespread	0.00	0.19	0.06	h	-	-	-	-	o
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/24/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.07	0.19	0.64	h	-	y	-	-	u
08/25/25	0.50	1.25	0.38	1.56	Moderate	Low	Widespread	0.19	0.46	0.97	h	-	y	-	y	h
08/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.03	0.00	h	-	-	-	-	h
08/27/25	0.10	0.25	0.08	0.31	0.00	0.00	Limited	0.00	0.61	0.09	u	m	-	-	-	h
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
09/02/25	0.50	1.00	0.38	1.25	Moderate	Low	Scattered	0.11	0.25	0.29	m	-	y	-	-	h

TABLE A-16 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	1.02	1.11	0.86	u	m	-	-	-	u
09/04/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.00	0.34	0.12	o	-	y	-	y	o
09/05/25	0.50	1.25	0.38	1.56	Moderate	Low	Widespread	0.00	0.00	0.00	fa	-	y	-	y	fa
09/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.01	m	-	-	-	-	m
09/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.00	0.14	0.11	o	-	y	-	y	o
09/18/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.55	0.86	0.67	u	m	-	-	-	u
09/19/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	m	-	-	-	-	fa
09/20/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
09/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.27	0.71	0.94	m	m	-	-	-	m
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/26/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.01	0.00	h	-	-	-	-	h
09/27/25	0.50	1.50	0.38	1.88	High	Moderate	Widespread	0.35	1.09	0.96	h	h	-	-	y	h
09/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-17 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
Rainbow Valley Forecast Zone (SW County)											Verification					
06/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/17/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
06/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/01/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
07/02/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	1.10	1.81	1.00	h	h	-	h	-	h
07/03/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.15	0.49	0.30	h	-	y	-	-	u
07/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
07/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m
07/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-17 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
07/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/15/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.00	0.06	0.01	h	-	-	-	-	h
07/16/25	0.50	1.25	0.38	1.56	Moderate	Low	Scattered	0.03	0.51	0.31	h	h	-	-	y	h
07/17/25	0.01	0.10	0.01	0.13	0.00	0.00	Limited	0.03	0.45	0.27	u	-	-	-	-	u
07/18/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.14	0.03	h	-	-	-	-	h
07/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	m	-	-	-	-	m
07/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Scattered	0.00	0.10	0.07	h	-	-	-	-	o
07/21/25	0.50	1.00	0.38	1.25	Moderate	Low	Scattered	0.00	0.12	0.06	o	-	y	-	-	o
07/22/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.31	0.48	0.20	h	-	y	-	-	h
07/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/26/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/27/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
07/31/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.27	0.07	h	-	y	-	-	h
08/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/02/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/03/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/04/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/05/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
08/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/08/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.15	m	-	-	-	-	m
08/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-17 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025

Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
08/13/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.39	1.59	0.20	u	h	-	m	-	u
08/14/25	0.25	0.75	0.19	0.94	High	0.00	Scattered	0.15	0.71	0.70	h	h	-	-	-	u
08/15/25	0.25	0.75	0.19	0.94	Moderate	0.00	Scattered	0.07	0.42	0.10	h	-	y	-	-	o
08/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/17/25	0.01	0.04	0.01	0.05	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
08/18/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/19/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/20/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/21/25	0.01	0.50	0.01	0.63	Moderate	0.00	Scattered	0.00	0.83	0.75	u	h	-	-	-	u
08/22/25	0.01	0.25	0.01	0.31	0.00	0.00	Widespread	0.00	0.00	0.00	fa	-	-	-	-	fa
08/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/24/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.03	1.00	0.24	o	h	-	-	-	u
08/25/25	0.25	0.75	0.19	0.94	Moderate	Low	Scattered	0.15	2.01	0.89	u	h	-	m	-	u
08/26/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.55	1.21	0.28	u	m	-	-	-	h
08/27/25	0.25	0.50	0.19	0.63	Low	0.00	Limited	0.00	0.04	0.00	o	-	y	-	-	h
08/28/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	m	-	-	-	-	m
08/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
08/31/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/01/25	0.00		0.00	0.00	0.00	0.00	0.00	0.03	0.60	0.34	m	m	-	-	-	m
09/02/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.00	0.05	0.00	h	m	-	-	-	h
09/03/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.86	1.37	0.98	u	m	-	m	-	u
09/04/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.07	0.81	0.15	h	h	-	-	y	o
09/05/25	0.75	1.50	0.56	1.88	High	Moderate	Widespread	0.00	0.02	0.00	o	-	y	-	y	o
09/06/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/07/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/08/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/09/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/10/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	m	-	-	-	-	m
09/11/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	m	-	-	-	-	m

TABLE A-17 MSP Outlooks Issued, Daily Verification Table - Monsoon 2025																
Date	QPF Min	QPF Max	LB25% QPF	UB25% QPF	CHANCE ≥0.50	CHANCE ≥1.25	COVERAGE	ALERT	GAQPE	Obs. Coverage (%)	AOF	POD (≥0.50)	FA (≥0.50)	POD (≥1.25)	FA (≥1.25)	AOC
09/12/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/13/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/14/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/15/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/16/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/17/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	0.00	0.28	0.07	o	-	y	-	-	o
09/18/25	0.01	0.50	0.01	0.63	Low	0.00	Limited	0.07	0.19	0.06	h	-	y	-	-	h
09/19/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/20/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.03	0.00	h	-	-	-	-	h
09/21/25	0.00		0.00	0.00	0.00	0.00	0.00	0.03	0.49	0.26	m	-	-	-	-	m
09/22/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/23/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/24/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/25/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.14	m	-	-	-	-	m
09/26/25	0.50	1.00	0.38	1.25	Moderate	0.00	Scattered	1.10	1.68	0.87	u	h	-	m	-	u
09/27/25	0.25	0.75	0.19	0.94	Moderate	0.00	Widespread	0.39	1.84	0.84	u	h	-	m	-	h
09/28/25	0.01	0.25	0.01	0.31	0.00	0.00	Limited	0.00	0.00	0.00	fa	-	-	-	-	fa
09/29/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-
09/30/25	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	h	-	-	-	-	-

TABLE A-18: This table provides monthly summary verification of select data from MSP issued precipitation forecasts contained in the daily Outlooks detailed in Tables A 1-17. The table is broken down by month and MSP Forecast Zone. The columns from left to right are defined as follows:

Accurate Forecasts – Number of correct forecasts days out of total days in the month.

AOF – Accuracy of forecasts as a percentage.

AOC – Accuracy of forecast measurable rain coverage for rain days only as percentage.

Sig. Events (≥0.50" & ≥1.25") – Number of operationally significant days (OSE) detected correctly.

POD (≥0.50" & ≥1.25") – Probability of detection as a percentage.

False Alarms ($\geq 0.50''$ & $\geq 1.25''$) – Number of false alarms.

FAR ($\geq 0.50''$ & $\geq 1.25''$) – False alarm rate as a percentage.

TS – Critical Success Index for “Legacy” calculation (considers accurate daily QPF forecasts and false alarms for OSE $\geq 0.50''$), rain day events ($\geq 0.01''$), OSE $\geq 0.50''$ events, and OSE $\geq 1.25''$ events.

TABLE A-18: MSP Weather Outlook Verification – Monsoon 2025															
Forecast Zone	Accurate Forecasts	AOF (%)	AOC (%)	Sig. $\geq 0.50''$ Events	POD $\geq 0.50''$ (%)	False Alarms $\geq 0.50''$	FAR $\geq 0.50''$ (%)	Sig. $\geq 1.25''$ Events	POD $\geq 1.25''$ (%)	False Alarms $\geq 1.25''$	FAR $\geq 1.25''$ (%)	TS Legacy (%)	TS $\geq 0.01''$ (%)	TS $\geq 0.50''$ (%)	TS $\geq 1.25''$ (%)
June															
East Valley	15/16	93.8	0.0	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	93.8	0.0	n/a	n/a
Gila River	15/16	93.8	0.0	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	93.8	0.0	n/a	n/a
Phoenix North	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
Phoenix South	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
Scottsdale South	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
Southeast Valley	15/16	93.8	0.0	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	93.8	0.0	n/a	n/a
Lower Salt River Lakes	15/16	93.8	0.0	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	93.8	0.0	n/a	n/a
New River/Cave Creek	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
Scottsdale North	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
Superstition	15/16	93.8	0.0	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	93.8	0.0	n/a	n/a
Northwest Valley	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
Upper Centennial	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
West Valley	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
Wickenburg	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
Gila Bend	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
Palo Verde	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
Rainbow Valley	16/16	100	n/a	0/0	n/a	0/0	0.0	n/a	0/0	0	n/a	100	n/a	n/a	n/a
All Zones	267/272	98.2	0	0/0	n/a	0/272	0.0	n/a	0/272	0	n/a	98.2	0	n/a	n/a
July															
East Valley	23/31	74.2	21.4	3/3	100	0/31	0.0	0/0	n/a	0	0.0	74.2	57.1	100	n/a

TABLE A-18: MSP Weather Outlook Verification – Monsoon 2025

Forecast Zone	Accurate Forecasts	AOF (%)	AOC (%)	Sig. ≥0.50" Events	POD ≥0.50" (%)	False Alarms ≥0.50"	FAR ≥0.50" (%)	Sig. ≥1.25" Events	POD ≥1.25" (%)	False Alarms ≥1.25"	FAR ≥1.25" (%)	TS Legacy (%)	TS ≥0.01" (%)	TS ≥0.50" (%)	TS ≥1.25" (%)
Gila River	22/31	71.0	23.1	3/3	100	3/31	9.7	0/1	0.0	1	3.2	64.7	64.3	50.0	0.0
Phoenix North	27/31	87.1	42.9	0/1	0.0	2/31	6.5	0/0	n/a	0	0.0	81.8	66.7	0.0	n/a
Phoenix South	25/31	80.6	50.0	1/1	100	2/31	6.5	0/0	n/a	1	3.2	75.8	58.3	33.3	0.0
Scottsdale South	27/31	87.1	58.3	0/0	n/a	3/31	9.7	0/0	n/a	0	0.0	79.4	71.4	0.0	n/a
Southeast Valley	28/31	90.3	28.6	1/2	50.0	2/31	6.5	0/1	0.0	0	0.0	84.8	80.0	25.0	0.0
Lower Salt River Lakes	26/31	83.9	60.0	3/4	75.0	3/31	9.7	0/1	0.0	0	0.0	76.5	81.8	42.9	0.0
New River/Cave Creek	25/31	80.6	45.5	1/2	50.0	3/31	9.7	0/0	n/a	0	0.0	73.5	55.6	20.0	n/a
Scottsdale North	26/31	83.9	12.5	1/1	100	3/31	9.7	0/0	n/a	0	0.0	76.5	70.0	25.0	n/a
Superstition	26/31	83.9	44.4	1/1	100	5/31	16.1	0/0	n/a	0	0.0	72.2	76.9	16.7	n/a
Northwest Valley	23/31	74.2	53.8	1/2	50.0	3/31	9.7	1/1	100	1	3.2	67.6	33.3	20.0	50.0
Upper Centennial	26/31	83.9	0.0	2/2	100	1/31	3.2	0/0	n/a	1	3.2	81.3	57.1	66.7	0.0
West Valley	19/31	61.3	50.0	1/1	100	3/31	9.7	1/1	100	1	3.2	55.9	40.0	25.0	50.0
Wickenburg	24/31	77.4	21.4	0/0	n/a	4/31	12.9	0/0	n/a	1	3.2	68.6	33.3	0.0	0.0
Gila Bend	25/31	80.6	50.0	4/6	66.7	5/31	16.1	1/1	100	1	3.2	69.4	91.7	36.4	50.0
Palo Verde	23/31	74.2	33.3	2/3	66.7	1/31	3.2	1/1	100	0	0.0	71.9	44.4	50.0	100
Rainbow Valley	25/31	80.6	12.5	2/2	100	4/31	12.9	1/1	100	1	3.2	71.4	71.4	33.3	50.0
All Zones	420/527	79.7	38.0	26/34	76.5	47/527	8.9	5/8	62.5	8/527	1.5	73.2	62.5	32.1	31.3
August															
East Valley	18/31	58.1	26.7	2/6	33.3	0/31	0.0	0/2	0.0	0	0.0	58.1	43.8	33.3	0.0
Gila River	20/31	64.5	18.2	3/5	60.0	1/31	3.2	0/3	0.0	0	0.0	62.5	42.9	50.0	0.0
Phoenix North	19/31	61.3	8.3	1/5	20.0	0/31	0.0	0/2	0.0	0	0.0	61.3	53.8	20.0	0.0
Phoenix South	17/31	54.8	0.0	1/5	20.0	1/31	3.2	0/2	0.0	0	0.0	53.1	40.0	16.7	0.0
Scottsdale South	19/31	61.3	16.7	1/4	25.0	0/31	0.0	0/1	0.0	0	0.0	61.3	38.5	25.0	0.0
Southeast Valley	18/31	58.1	13.3	1/3	33.3	1/31	3.2	0/2	0.0	0	0.0	56.3	31.3	25.0	0.0
Lower Salt River Lakes	25/31	80.6	10.0	2/3	66.7	3/31	9.7	0/1	0.0	0	0.0	73.5	63.6	33.3	0.0

TABLE A-18: MSP Weather Outlook Verification – Monsoon 2025

Forecast Zone	Accurate Forecasts	AOF (%)	AOC (%)	Sig. ≥0.50" Events	POD ≥0.50" (%)	False Alarms ≥0.50"	FAR ≥0.50" (%)	Sig. ≥1.25" Events	POD ≥1.25" (%)	False Alarms ≥1.25"	FAR ≥1.25" (%)	TS Legacy (%)	TS ≥0.01" (%)	TS ≥0.50" (%)	TS ≥1.25" (%)
New River/Cave Creek	19/31	61.3	16.7	3/6	50.0	2/31	6.5	0/2	0.0	0	0.0	57.6	53.3	37.5	0.0
Scottsdale North	23/31	74.2	16.7	1/3	33.3	3/31	9.7	0/1	0.0	0	0.0	67.6	46.2	16.7	0.0
Superstition	16/31	51.6	12.5	1/2	50.0	1/31	3.2	0/0	0.0	0	0.0	50.0	38.9	33.3	n/a
Northwest Valley	25/31	80.6	36.4	0/2	0.0	2/31	6.5	0/1	0.0	0	0.0	75.8	66.7	0.0	0.0
Upper Centennial	24/31	77.4	50.0	4/7	57.1	1/31	3.2	1/2	50.0	0	0.0	75.0	75.0	50.0	50.0
West Valley	22/31	71.0	33.3	2/6	33.3	2/31	6.5	0/2	0.0	0	0.0	66.7	69.2	25.0	0.0
Wickenburg	24/31	77.4	40.0	2/2	100.0	3/31	9.7	0/0	0.0	1	3.2	70.6	72.7	40.0	0.0
Gila Bend	20/31	64.5	25.0	6/7	85.7	2/31	6.5	0/3	0.0	1	3.2	60.6	60.0	66.7	0.0
Palo Verde	24/31	77.4	54.5	0/1	0.0	3/31	9.7	0/0	0.0	1	3.2	70.6	66.7	0.0	0.0
Rainbow Valley	20/31	64.5	18.2	5/6	83.3	2/31	6.5	0/2	0.0	0	0.0	60.6	61.5	62.5	0.0
All Zones	353/527	67.0	22.8	35/73	47.9	27/527	5.1	1/26	3.8	3/527	0.6	63.7	53.0	35.0	3.4
September															
East Valley	18/30	60.0	15.4	2/5	40.0	1/30	3.3	1/1	100	1	3.3	58.1	60.0	33.3	50.0
Gila River	18/30	60.0	18.8	1/4	25.0	4/30	13.3	0/3	0.0	1	3.3	52.9	76.5	12.5	0.0
Phoenix North	20/30	66.7	16.7	3/6	50.0	3/30	10.0	1/4	25.0	2	6.7	60.6	69.2	33.3	16.7
Phoenix South	20/30	66.7	15.4	4/8	50.0	0/30	0.0	2/5	40.0	1	3.3	66.7	69.2	50.0	33.3
Scottsdale South	22/30	73.3	10.0	2/6	33.3	2/30	6.7	1/3	33.3	1	3.3	68.8	90.0	25.0	25.0
Southeast Valley	22/30	73.3	33.3	1/4	25.0	4/30	13.3	1/1	100	1	3.3	64.7	80.0	12.5	50.0
Lower Salt River Lakes	18/30	60.0	27.3	5/7	71.4	5/30	16.7	1/2	50.0	2	6.7	51.4	64.7	41.7	25.0
New River/Cave Creek	18/30	60.0	29.4	5/8	62.5	4/30	13.3	1/4	25.0	3	10.0	52.9	73.7	41.7	14.3
Scottsdale North	18/30	60.0	15.4	4/7	57.1	2/30	6.7	2/2	100	1	3.3	56.3	75.0	44.4	66.7
Superstition	20/30	66.7	38.5	3/4	75.0	4/30	13.3	1/1	100	2	6.7	58.8	58.8	37.5	33.3
Northwest Valley	20/30	66.7	37.5	5/8	62.5	2/30	6.7	0/3	0.0	1	3.3	62.5	66.7	50.0	0.0
Upper Centennial	19/30	63.3	33.3	7/10	70.0	4/30	13.3	1/4	25.0	3	10.0	55.9	70.6	50.0	14.3
West Valley	16/30	53.3	25.0	4/7	57.1	2/30	6.7	2/5	40.0	0	0.0	50.0	35.7	44.4	40.0

TABLE A-18: MSP Weather Outlook Verification – Monsoon 2025

Forecast Zone	Accurate Forecasts	AOF (%)	AOC (%)	Sig. $\geq 0.50''$ Events	POD $\geq 0.50''$ (%)	False Alarms $\geq 0.50''$	FAR $\geq 0.50''$ (%)	Sig. $\geq 1.25''$ Events	POD $\geq 1.25''$ (%)	False Alarms $\geq 1.25''$	FAR $\geq 1.25''$ (%)	TS Legacy (%)	TS $\geq 0.01''$ (%)	TS $\geq 0.50''$ (%)	TS $\geq 1.25''$ (%)
Wickenburg	18/30	60.0	20.0	1/7	14.3	8/30	26.7	0/3	0.0	3	10.0	47.4	70.6	6.7	0.0
Gila Bend	20/30	66.7	35.3	7/8	87.5	4/30	13.3	1/2	50.0	3	10.0	58.8	72.2	58.3	20.0
Palo Verde	20/30	66.7	36.4	1/4	25.0	4/30	13.3	0/0	n/a	4	13.3	58.8	50.0	12.5	0.0
Rainbow Valley	17/30	56.7	28.6	3/6	50.0	3/30	10.0	0/3	0.0	2	6.7	51.5	52.9	33.3	0.0
All Zones	324/510	63.5	26.2	58/109	53.2	56/510	11.0	15/46	32.6	31/510	6.1	57.2	66.8	35.2	19.5

APPENDIX B: MSP MESSAGES – VERIFICATION TABLES

TABLE B-1: This table shows each of the individual MSP Statements issued during Monsoon 2025 including the detailed forecast rainfall information. The table is broken down by date and MSP Message. The columns from left to right are defined as follows:

Statement Details – Message information including date, time issued in local standard time, Forecast Zone, Message type, and issuing forecaster. Data is pulled directly from issued Message.

Forecast Rain – Rain information including storm total precipitation (STP) where applicable. Data is pulled directly from issued Message. It is important to note that not all issued Messages contain forecast rainfall information (noted by “n/a” in the table).

TABLE B-1: MSP Statements Issued - Monsoon 2025						
Statement Details						Forecast Rain
Date	LST	MSP Forecast Zone	Message	Forecaster	Valid Time	STP (in)
07/02/25	19:13	Gila River	1	Malloy	Now-9:00pm	0.50-0.75/1.25
07/02/25	20:41	Palo Verde	1	Malloy	Now-10:00pm	0.50-1.00/1.25
07/02/25	19:13	Rainbow Valley	1	Malloy	Now-9:00pm	0.50-0.75/1.25
07/02/25	19:49	West Valley	1	Malloy	Now-9:00pm	0.50-0.75/1.50
08/14/25	21:42	New River/Cave Creek	1	Henz	Now-11:30pm	0.50-1.00/1.50
08/14/25	21:01	Northwest Valley	1	Henz	Now-11:00pm	0.50-1.00/1.50
08/14/25	21:42	Phoenix North	1	Henz	Now-11:30pm	0.50-1.00/1.50
08/14/25	23:10	Scottsdale South	1	Henz	Now-1:00am	0.50-1.00/1.50
08/15/25	16:12	Gila Bend	1	Malloy	Now-6:30pm	0.25-0.75/1.25
08/15/25	2:02	Gila River	1	Henz	Now-4:00am	0.50-1.00/1.50
08/15/25	2:02	Southeast Valley	1	Henz	Now-4:00am	0.50-1.00/1.50
08/15/25	17:30	Upper Centennial	1	Malloy	Now-8:30pm	0.50-1.00
08/21/25	19:14	East Valley	1	Malloy	Now-8:00pm	0.50-0.75/1.00
08/21/25	17:47	Lower Salt River Lakes	1	Malloy	Now-6:45pm	0.50-0.75/1.00
08/21/25	20:38	Phoenix North	1	Malloy	Now-9:45pm	0.50-0.75/1.00
08/21/25	20:38	Phoenix South	1	Malloy	Now-9:45pm	0.50-0.75/1.00
08/21/25	19:25	Phoenix South	1	Malloy	Now-8:30pm	0.50-0.75/1.00
08/21/25	18:31	Superstition	1	Malloy	Now-7:30pm	0.50-0.75/1.00
08/25/25	17:26	East Valley	1	Henz	Now-7:00pm	0.50-0.75/1.25

TABLE B-1: MSP Statements Issued - Monsoon 2025						
Statement Details						Forecast Rain
Date	LST	MSP Forecast Zone	Message	Forecaster	Valid Time	STP (in)
08/25/25	18:33	New River/Cave Creek	1	Malloy	Now-8:00pm	0.50-0.75/1.25
08/25/25	18:12	Phoenix North	1	Henz	Now-8:00pm	0.50-0.75/1.25
08/25/25	17:41	Phoenix South	1	Henz	Now-7:00pm	0.50-0.75/1.25
08/25/25	17:26	Southeast Valley	1	Henz	Now-7:00pm	0.50-0.75/1.25
08/25/25	20:51	Upper Centennial	1	Henz	Now-11:00pm	0.50-1.00/2.00
08/25/25	20:51	Wickenburg	1	Henz	Now-11:00pm	0.50-1.00/2.00
08/25/25	18:12	Scottsdale South	1	Henz	Now-8:00pm	0.50-0.75/1.25
08/26/25	21:52	Phoenix North	1	Henz	Now-11:00pm	0.50-0.75/1.25
08/26/25	21:35	Phoenix South	1	Henz	Now-11:00pm	0.50-0.75/1.25
08/26/25	12:50	Upper Centennial	1	Malloy	Now-3:00pm	0.50-1.00/2.00
09/02/25	14:06	Gila Bend	1	Whipple	Now-3:15pm	0.50-0.75/1.25
09/03/25	20:45	East Valley	1	Malloy	Now-10:45pm	0.50-1.00/1.50
09/03/25	16:10	Gila Bend	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	20:06	Gila River	1	Malloy	Now-10:00pm	0.50-1.00/1.50
09/03/25	16:10	Lower Salt River Lakes	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	New River/Cave Creek	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	23:48	Northwest Valley	1	Malloy	Now-2:00am	0.50-0.75/1.00
09/03/25	16:10	Northwest Valley	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	21:30	Phoenix North	1	Whipple	Now-11:30pm	0.50-1.00/1.25
09/03/25	23:30	Phoenix North	1	Whipple	Now-1:00am	0.25-0.75/1.00
09/03/25	21:30	Phoenix South	1	Whipple	Now-11:30pm	0.50-1.00/1.25
09/03/25	23:30	Phoenix South	1	Whipple	Now-1:00am	0.25-0.75/1.00
09/03/25	16:10	Phoenix South	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	Rainbow Valley	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	Scottsdale North	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	21:11	Scottsdale South	1	Malloy	Now-11:00pm	0.50-1.00/1.25
09/03/25	20:06	Southeast Valley	1	Malloy	Now-10:00pm	0.50-1.00/1.50
09/03/25	16:10	Upper Centennial	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	West Valley	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00

TABLE B-1: MSP Statements Issued - Monsoon 2025						
Statement Details						Forecast Rain
Date	LST	MSP Forecast Zone	Message	Forecaster	Valid Time	STP (in)
09/03/25	16:10	Wickenburg	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	East Valley	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	Gila River	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	Palo Verde	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	Phoenix North	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	Scottsdale South	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	Southeast Valley	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/03/25	16:10	Superstition	2	Henz/Malloy	9/4 (12PM) - 9/5 (8PM)	1.00-2.00
09/04/25	2:11	Palo Verde	1	Malloy	Now-4:00am	0.50-0.75/1.00
09/04/25	0:15	West Valley	1	Malloy	Now-2:00am	0.50-0.75/1.00
09/05/25	9:53	Wickenburg	1	Malloy	Now-1:00pm	0.50-1.00/2.00
09/05/25	11:18	New River/Cave Creek	1	Malloy	12:00pm-3:00pm	0.50-1.00/2.00
09/05/25	10:28	Northwest Valley	1	Malloy	Now-1:00pm	0.50-1.00/2.00
09/05/25	9:53	Upper Centennial	1	Malloy	Now-1:00pm	0.50-1.00/2.00
09/06/25	6:24	Upper Centennial	1	Malloy	Now-8:30am	0.50-1.00/1.25
09/19/25	3:50	New River/Cave Creek	1	Henz	Now-6:00am	0.50-1.00/1.25
09/19/25	6:16	New River/Cave Creek	1	Malloy	Now-8:30am	0.50-1.00/1.25
09/19/25	10:46	Phoenix North	1	Malloy	Now-12:00pm	0.25-0.50/0.75
09/19/25	3:50	Scottsdale North	1	Henz	Now-6:00am	0.50-1.00/1.25
09/19/25	9:13	Scottsdale North	1	Malloy	Now-11:15am	0.25-0.50/0.75
09/19/25	12:02	Scottsdale North	1	Malloy	Now-1:30pm	0.25-0.50/0.75
09/26/25	12:12	East Valley	1	Malloy	Now-4:00pm	0.50-1.25/1.75
09/26/25	16:13	East Valley	3	Malloy	Now-8:00pm	n/a
09/26/25	13:56	East Valley	3	Malloy	Now-5:00pm	n/a
09/26/25	12:33	Lower Salt River Lakes	1	Malloy	1:00pm-4:00pm	0.75-1.50/2.00
09/26/25	10:10	New River/Cave Creek	1	Whipple	Now-1:00pm	0.75-1.50/2.00
09/26/25	13:49	Northwest Valley	1	Malloy	Now-5:00pm	0.50-1.00/1.50
09/26/25	9:26	Northwest Valley	1	Malloy	Now-12:30pm	0.75-1.50/2.00
09/26/25	10:05	Phoenix North	1	Malloy	Now-1:00pm	0.75-1.50/2.00

TABLE B-1: MSP Statements Issued - Monsoon 2025						
Statement Details						Forecast Rain
Date	LST	MSP Forecast Zone	Message	Forecaster	Valid Time	STP (in)
09/26/25	16:05	Phoenix North	3	Whipple	Now-8:00pm	n/a
09/26/25	12:58	Phoenix North	3	Whipple	Now-4:00pm	n/a
09/26/25	13:02	Phoenix South	1	Malloy	Now-5:00pm	0.50-1.25/1.75
09/26/25	10:05	Phoenix South	1	Malloy	Now-1:00pm	0.75-1.50/2.00
09/26/25	16:07	Phoenix South	3	Whipple	Now-8:00pm	n/a
09/26/25	13:11	Phoenix South	3	Malloy	Now-4:00pm	n/a
09/26/25	13:02	Rainbow Valley	1	Malloy	Now-5:00pm	0.50-1.25/1.75
09/26/25	10:36	Scottsdale North	1	Malloy	11:00am-2:00pm	0.75-1.50/2.00
09/26/25	16:22	Scottsdale North	3	Whipple	Now-8:00pm	n/a
09/26/25	12:45	Scottsdale North	3	Whipple	Now-4:00pm	n/a
09/26/25	10:36	Scottsdale South	1	Malloy	11:00am-2:00pm	0.75-1.50/2.00
09/26/25	16:03	Scottsdale South	3	Malloy	Now-8:00pm	n/a
09/26/25	13:28	Scottsdale South	3	Malloy	Now-4:30pm	n/a
09/26/25	12:23	Southeast Valley	1	Malloy	Now-4:00pm	0.75-1.50/2.00
09/26/25	12:23	Superstition	1	Malloy	Now-4:00pm	0.75-1.50/2.00
09/26/25	14:55	Upper Centennial	1	Malloy	Now-6:00pm	0.50-1.00
09/26/25	13:02	West Valley	1	Malloy	Now-5:00pm	0.50-1.25/1.75
09/26/25	9:26	West Valley	1	Malloy	Now-12:30pm	0.75-1.50/2.00
09/26/25	10:14	Wickenburg	1	Malloy	Now-1:30pm	0.50-0.75/1.50
09/26/25	14:55	Wickenburg	1	Malloy	Now-6:00pm	0.50-1.00
09/27/25	18:55	New River/Cave Creek	1	Henz	Now-9:30pm	0.50-1.00/1.50
09/27/25	16:09	Palo Verde	1	Henz	Now-6:30pm	0.50-1.00/1.50
09/27/25	18:26	Phoenix North	1	Whipple	Now-8:30pm	0.50-1.00/1.50
09/27/25	18:26	Scottsdale South	1	Whipple	Now-8:30pm	0.50-1.00/1.50
09/27/25	16:48	Upper Centennial	1	Henz	Now-7:00pm	0.50-1.00/1.50

TABLE B-2: This table shows the raw verification data of MSP issued Messages for Monsoon 2025. The valid period for rainfall for each Message can be found in Table B-1. The table is broken down by date and MSP Message. The columns from left to right are defined as follows:

Statement Details – Statement information including date, Forecast Zone, and Message type.

Forecast Rain – Rain information including forecast storm total precipitation (STP) where applicable. It is important to note that not all issued statements contain forecast rainfall information (noted by “n/a” in the table).

Rain Observations – Observed rainfall amounts within the forecast zone including ALERT rain gages, gage adjusted radar rainfall totals, and local storm reports submitted to NWS Phoenix WFO.

Alarms – Triggered alarms on ALERT gage sensors. These alarms are broken down by alarm type including rain, stream, and dam.

Verification – The verification was broken down by rain and by alarm. Hits and misses were assigned based on thresholds previously discussed in the [MSP Verification Metrics and Criteria](#) section of this report.

TABLE B-2: MSP Statements Issued - Monsoon 2025										
Statement Details			Forecast Rain	Rain Observations (in)			Alarms			Verification
Date	MSP Forecast Zone	Message	STP (in)	ALERT	GAQPE	LSRs	Rain	Stream	Dam	Hit/Miss
07/02/25	Gila River	1	0.50-0.75/1.25	0.12	0.62					Hit
07/02/25	Palo Verde	1	0.50-1.00/1.25	0.47	1.00					Hit
07/02/25	Rainbow Valley	1	0.50-0.75/1.25	1.07	1.67		x			Hit
07/02/25	West Valley	1	0.50-0.75/1.50	0.71	1.85					Hit
08/14/25	New River/Cave Creek	1	0.50-1.00/1.50	1.26	1.40		x			Hit
08/14/25	Northwest Valley	1	0.50-1.00/1.50	0.24	1.40					Hit
08/14/25	Phoenix North	1	0.50-1.00/1.50	0.94	2.75			x		Hit
08/14/25	Scottsdale South	1	0.50-1.00/1.50	0.31	0.40					Miss
08/15/25	Gila Bend	1	0.25-0.75/1.25	0.43	1.60					Hit
08/15/25	Gila River	1	0.50-1.00/1.50	0.52	1.60					Hit
08/15/25	Southeast Valley	1	0.50-1.00/1.50	0.28	1.40					Hit
08/15/25	Upper Centennial	1	0.50-1.00	0.39	0.66					Hit
08/21/25	East Valley	1	0.50-0.75/1.00	0.31	0.55					Hit

TABLE B-2: MSP Statements Issued - Monsoon 2025

Statement Details			Forecast Rain	Rain Observations (in)			Alarms			Verification
Date	MSP Forecast Zone	Message	STP (in)	ALERT	GAQPE	LSRs	Rain	Stream	Dam	Hit/Miss
08/21/25	Lower Salt River Lakes	1	0.50-0.75/1.00	0.24	1.20					Hit
08/21/25	Phoenix North	1	0.50-0.75/1.00	0.08	0.42			x		Hit
08/21/25	Phoenix South	1	0.50-0.75/1.00	0.39	0.60			x		Hit
08/21/25	Phoenix South	1	0.50-0.75/1.00	0.31	0.60			x		Hit
08/21/25	Superstition	1	0.50-0.75/1.00	0.67	1.00					Hit
08/25/25	East Valley	1	0.50-0.75/1.25	0.83	0.95		x			Hit
08/25/25	New River/Cave Creek	1	0.50-0.75/1.25	0.59	0.78					Hit
08/25/25	Phoenix North	1	0.50-0.75/1.25	0.55	0.77		x			Hit
08/25/25	Phoenix South	1	0.50-0.75/1.25	1.14	1.25		x			Hit
08/25/25	Southeast Valley	1	0.50-0.75/1.25	0.75	0.75					Hit
08/25/25	Upper Centennial	1	0.50-1.00/2.00	0.80	0.95		x			Hit
08/25/25	Wickenburg	1	0.50-1.00/2.00	0.04	0.80		x			Hit
08/25/25	Scottsdale South	1	0.50-0.75/1.25	0.16	0.45					Miss
08/26/25	Phoenix North	1	0.50-0.75/1.25	1.07	0.60			x		Hit
08/26/25	Phoenix South	1	0.50-0.75/1.25	0.91	0.70		x			Hit
08/26/25	Upper Centennial	1	0.50-1.00/2.00	0.75	1.20					Hit
09/02/25	Gila Bend	1	0.50-0.75/1.25	0.20	0.50					Hit
09/03/25	East Valley	1	0.50-1.00/1.50	0.59	1.19					Hit
09/03/25	Gila Bend	2	1.00-2.00	0.04	2.14					Hit
09/03/25	Gila River	1	0.50-1.00/1.50	0.75	1.32					Hit
09/03/25	Lower Salt River Lakes	2	1.00-2.00	0.00	0.62					Hit
09/03/25	New River/Cave Creek	2	1.00-2.00	0.00	0.69					Hit
09/03/25	Northwest Valley	1	0.50-0.75/1.00	0.67	1.40					Hit
09/03/25	Northwest Valley	2	1.00-2.00	0.00	0.59					Hit
09/03/25	Phoenix North	1	0.50-1.00/1.25	1.38	1.60				x	Hit
09/03/25	Phoenix North	1	0.25-0.75/1.00	0.16	0.84			x		Hit
09/03/25	Phoenix South	1	0.50-1.00/1.25	0.98	1.50		x			Hit
09/03/25	Phoenix South	1	0.25-0.75/1.00	0.47	0.84					Hit
09/03/25	Phoenix South	2	1.00-2.00	0.00	2.41					Hit

TABLE B-2: MSP Statements Issued - Monsoon 2025										
Statement Details			Forecast Rain	Rain Observations (in)			Alarms			Verification
Date	MSP Forecast Zone	Message	STP (in)	ALERT	GAQPE	LSRs	Rain	Stream	Dam	Hit/Miss
09/03/25	Rainbow Valley	2	1.00-2.00	0.08	0.83					Hit
09/03/25	Scottsdale North	2	1.00-2.00	0.12	0.58					Hit
09/03/25	Scottsdale South	1	0.50-1.00/1.25	0.71	1.01		x			Hit
09/03/25	Southeast Valley	1	0.50-1.00/1.50	0.51	0.68					Hit
09/03/25	Upper Centennial	2	1.00-2.00	0.43	2.49					Hit
09/03/25	West Valley	2	1.00-2.00	0.24	3.50					Hit
09/03/25	Wickenburg	2	1.00-2.00	0.08	0.62		x			Hit
09/03/25	East Valley	2	1.00-2.00	0.00	0.36					Miss
09/03/25	Gila River	2	1.00-2.00	0.00	0.23					Miss
09/03/25	Palo Verde	2	1.00-2.00	0.00	0.34					Miss
09/03/25	Phoenix North	2	1.00-2.00	0.00	0.08					Miss
09/03/25	Scottsdale South	2	1.00-2.00	0.00	0.19					Miss
09/03/25	Southeast Valley	2	1.00-2.00	0.12	0.20					Miss
09/03/25	Superstition	2	1.00-2.00	0.00	0.02					Miss
09/04/25	Palo Verde	1	0.50-0.75/1.00	1.02	1.34		x			Hit
09/04/25	West Valley	1	0.50-0.75/1.00	0.83	1.11					Hit
09/05/25	Wickenburg	1	0.50-1.00/2.00	0.04	0.60		x			Hit
09/05/25	New River/Cave Creek	1	0.50-1.00/2.00	0.00	0.14					Miss
09/05/25	Northwest Valley	1	0.50-1.00/2.00	0.00	0.25					Miss
09/05/25	Upper Centennial	1	0.50-1.00/2.00	0.16	0.30					Miss
09/06/25	Upper Centennial	1	0.50-1.00/1.25	0.28	1.20					Hit
09/19/25	New River/Cave Creek	1	0.50-1.00/1.25	0.95	1.25		x			Hit
09/19/25	New River/Cave Creek	1	0.50-1.00/1.25	0.47	1.65					Hit
09/19/25	Phoenix North	1	0.25-0.50/0.75	0.59	0.60					Hit
09/19/25	Scottsdale North	1	0.50-1.00/1.25	0.55	1.15					Hit
09/19/25	Scottsdale North	1	0.25-0.50/0.75	0.36	0.90					Hit
09/19/25	Scottsdale North	1	0.25-0.50/0.75	0.24	0.50					Hit
09/26/25	East Valley	1	0.50-1.25/1.75	1.93	1.97					Hit
09/26/25	East Valley	3	n/a	0.51	0.95					Hit

TABLE B-2: MSP Statements Issued - Monsoon 2025

Statement Details			Forecast Rain	Rain Observations (in)			Alarms			Verification
Date	MSP Forecast Zone	Message	STP (in)	ALERT	GAQPE	LSRs	Rain	Stream	Dam	Hit/Miss
09/26/25	East Valley	3	n/a	0.98	1.60					Hit
09/26/25	Lower Salt River Lakes	1	0.75-1.50/2.00	0.51	1.80					Hit
09/26/25	New River/Cave Creek	1	0.75-1.50/2.00	1.06	1.40		x			Hit
09/26/25	Northwest Valley	1	0.50-1.00/1.50	0.98	1.10					Hit
09/26/25	Northwest Valley	1	0.75-1.50/2.00	1.50	2.30					Hit
09/26/25	Phoenix North	1	0.75-1.50/2.00	1.14	1.60			x		Hit
09/26/25	Phoenix North	3	n/a	0.12	0.40			x	x	Hit
09/26/25	Phoenix North	3	n/a	1.10	1.80		x	x	x	Hit
09/26/25	Phoenix South	1	0.50-1.25/1.75	1.89	2.40		x			Hit
09/26/25	Phoenix South	1	0.75-1.50/2.00	1.06	1.80					Hit
09/26/25	Phoenix South	3	n/a	0.28	0.40			x	x	Hit
09/26/25	Phoenix South	3	n/a	1.89	2.50		x			Hit
09/26/25	Rainbow Valley	1	0.50-1.25/1.75	0.75	3.10					Hit
09/26/25	Scottsdale North	1	0.75-1.50/2.00	1.38	1.80		x			Hit
09/26/25	Scottsdale North	3	n/a	0.99	1.60		x			Hit
09/26/25	Scottsdale North	3	n/a	2.80	2.50		x		x	Hit
09/26/25	Scottsdale South	1	0.75-1.50/2.00	1.57	1.60			x		Hit
09/26/25	Scottsdale South	3	n/a	0.31	0.90			x		Hit
09/26/25	Scottsdale South	3	n/a	2.17	2.40		x	x		Hit
09/26/25	Southeast Valley	1	0.75-1.50/2.00	1.14	2.05					Hit
09/26/25	Superstition	1	0.75-1.50/2.00	1.41	1.80					Hit
09/26/25	Upper Centennial	1	0.50-1.00	0.36	0.70					Hit
09/26/25	West Valley	1	0.50-1.25/1.75	1.34	1.42					Hit
09/26/25	West Valley	1	0.75-1.50/2.00	1.06	2.00					Hit
09/26/25	Wickenburg	1	0.50-0.75/1.50	0.31	1.15		x			Hit
09/26/25	Wickenburg	1	0.50-1.00	0.12	0.20					Miss
09/27/25	New River/Cave Creek	1	0.50-1.00/1.50	0.71	1.07			x		Hit
09/27/25	Palo Verde	1	0.50-1.00/1.50	0.35	0.80					Hit
09/27/25	Phoenix North	1	0.50-1.00/1.50	0.83	1.20			x		Hit

TABLE B-2: MSP Statements Issued - Monsoon 2025										
Statement Details			Forecast Rain	Rain Observations (in)			Alarms			Verification
Date	MSP Forecast Zone	Message	STP (in)	ALERT	GAQPE	LSRs	Rain	Stream	Dam	Hit/Miss
09/27/25	Scottsdale South	1	0.50-1.00/1.50	0.86	0.90		x			Hit
09/27/25	Upper Centennial	1	0.50-1.00/1.50	0.63	0.92					Hit

TABLE B-3: This table shows the lead time data of MSP issued Messages for Monsoon 2025. The table is broken down by Statement details and lead time. The columns from left to right are defined as follows:

Statement Details – Statement information including date, issue time, forecast zone, message type, forecaster, and valid time.

Statement Lead time – The first column denotes the time when the first ALERT Alarm (rain, stream, or impoundment) was triggered if any. The second column depicts the calculated lead time based on beginning statement valid time and when the first alarm was triggered.

TABLE B-3: MSP Statement Lead Time - Monsoon 2025							
Statement Details						Statement Lead Time	
Date	LST	MSP Forecast Zone	Message	Forecaster	Valid Time	Alarm Triggered	Lead Time (min)
07/02/25	19:13	Rainbow Valley	1	Malloy	Now-9:00pm	19:53	40
08/14/25	21:42	Phoenix North	1	Henz	Now-11:30pm	22:56	74
08/14/25	21:42	New River/Cave Creek	1	Henz	Now-11:30pm	22:01	19
08/21/25	20:38	Phoenix North	1	Malloy	Now-9:45pm	20:26	0
08/21/25	20:38	Phoenix South	1	Malloy	Now-9:45pm	20:26	0
08/21/25	19:25	Phoenix South	1	Malloy	Now-8:30pm	20:26	61
08/25/25	20:51	Wickenburg	1	Henz	Now-11:00pm	19:44	0
08/25/25	20:51	Upper Centennial	1	Henz	Now-11:00pm	21:19	0
08/25/25	18:12	Phoenix North	1	Henz	Now-8:00pm	19:14	62
08/25/25	17:41	Phoenix South	1	Henz	Now-7:00pm	17:54	13
08/25/25	17:26	East Valley	1	Henz	Now-7:00pm	18:16	50
08/26/25	21:52	Phoenix North	1	Henz	Now-11:00pm	22:22	0
08/26/25	21:35	Phoenix South	1	Henz	Now-11:00pm	21:42	7
09/03/25	21:30	Phoenix North	1	Whipple	Now-11:30pm	22:33	63

TABLE B-3: MSP Statement Lead Time - Monsoon 2025							
Statement Details						Statement Lead Time	
Date	LST	MSP Forecast Zone	Message	Forecaster	Valid Time	Alarm Triggered	Lead Time (min)
09/03/25	21:30	Phoenix South	1	Whipple	Now-11:30pm	22:50	80
09/03/25	21:11	Scottsdale South	1	Malloy	Now-11:00pm	21:15	4
09/03/25	23:30	Phoenix North	1	Whipple	Now-1:00am	23:40	10
09/19/25	3:50	New River/Cave Creek	1	Henz	Now-6:00am	5:29	99
09/27/25	18:55	New River/Cave Creek	1	Henz	Now-9:30pm	19:34	39
09/27/25	18:26	Scottsdale South	1	Whipple	Now-8:30pm	18:34	8
09/27/25	18:26	Phoenix North	1	Whipple	Now-8:30pm	18:40	14
09/26/25	13:02	Phoenix South	1	Malloy	Now-5:00pm	13:12	10
09/26/25	10:36	Scottsdale North	1	Malloy	11:00am-2:00pm	13:56	174
09/26/25	10:36	Scottsdale South	1	Malloy	11:00am-2:00pm	11:18	32
09/26/25	10:14	Wickenburg	1	Malloy	Now-1:30pm	10:21	7
09/26/25	10:10	New River/Cave Creek	1	Whipple	Now-1:00pm	11:13	63
09/26/25	10:05	Phoenix North	1	Malloy	Now-1:00pm	12:36	91

APPENDIX C: MSP LAKE ALERTS – VERIFICATION TABLES

TABLE C-1: This table shows each of the individual MSP Lake Alerts issued during Monsoon 2025. The table is broken down by statement Details, observations, and verification. The columns from left to right are defined as follows:

Statement Details – Message information including date, time issued in local standard time, lake, issuing forecaster, and valid time. Data is pulled directly from issued Message.

Observations – Qualifying observations for Lake Alert verification include one or more of the following: Lighting, wind gust ≥ 30 mph, hail, or heavy rainfall ≥ 0.50 ".

Lead Time – amount of lead time in minutes from when Lake Alert was issued to when first observation occurred.

Verification – Hits and misses were assigned based on thresholds previously discussed in the [MSP Verification Metrics and Criteria](#) section of this report.

TABLE C-1: MSP Lake Alerts Issued - Monsoon 2025									
Statement Details					Observations			Lead Time	Verification
Date	LST	Lake	Forecaster	Valid Time	Lightning	Wind ≥ 30mph	Hail/Heavy Rain	1st Obs.	Hit/Miss
07/02/25	15:27	Canyon	Whipple	Now-5:00pm	x			0	Hit
07/02/25	15:27	Apache	Whipple	Now-5:00pm	x			0	Hit
07/02/25	17:47	Bartlett	Malloy	Now-6:30pm					Miss
07/02/25	17:47	Horseshoe	Malloy	Now-6:30pm					Miss
08/20/25	16:29	Canyon	Malloy	Now-6:00pm	x			52	Hit
08/20/25	16:29	Apache	Malloy	Now-6:00pm	x			15	Hit
08/20/25	16:35	Bartlett	Malloy	Now-6:00pm	x			11	Hit
08/20/25	16:06	Horseshoe	Whipple	Now-5:30pm	x			0	Hit
08/20/25	16:29	Saguaro	Malloy	Now-6:00pm					Miss
08/21/25	17:02	Canyon	Malloy	Now-6:00pm	x			43	Hit
08/21/25	17:02	Apache	Malloy	Now-6:00pm	x			21	Hit
08/21/25	16:08	Horseshoe	Malloy	Now-5:15pm	x	x		35	Hit
08/21/25	16:50	Bartlett	Malloy	Now-5:50pm	x			22	Hit

TABLE C-1: MSP Lake Alerts Issued - Monsoon 2025									
Statement Details					Observations			Lead Time	Verification
Date	LST	Lake	Forecaster	Valid Time	Lightning	Wind ≥30mph	Hail/Heavy Rain	1st Obs.	Hit/Miss
08/21/25	17:02	Saguaro	Malloy	Now-6:00pm	x			43	Hit
08/26/25	13:06	Horseshoe	Malloy	Now-2:30pm	x			21	Hit
09/01/25	16:24	Apache	Henz	Now-6:00pm	x			6	Hit
09/01/25	16:26	Bartlett	Henz	Now-6:00pm	x	x		12	Hit
09/01/25	16:24	Canyon	Henz	Now-6:00pm	x			13	Hit
09/01/25	16:26	Horseshoe	Henz	Now-6:00pm	x			15	Hit
09/01/25	16:24	Saguaro	Henz	Now-6:00pm	x	x		17	Hit
09/03/25	15:37	Apache	Malloy	Now-5:15pm	x			7	Hit
09/03/25	15:37	Canyon	Malloy	Now-5:15pm	x			44	Hit
09/03/25	15:37	Saguaro	Malloy	Now-5:15pm	x			75	Hit
09/05/25	17:13	Apache	Malloy	Now-5:45pm	x			0	Hit
09/05/25	14:32	Bartlett	Malloy	Now-3:15pm	x			25	Hit
09/05/25	12:19	Bartlett	Whipple	Now-2:00pm	x			18	Hit
09/05/25	17:13	Canyon	Malloy	Now-5:45pm	x			0	Hit
09/05/25	12:24	Horseshoe	Whipple	Now-2:00pm	x			13	Hit
09/05/25	11:23	Pleasant	Malloy	Now-1:30pm	x			17	Hit
09/06/25	16:38	Bartlett	Whipple	Now-6:00pm	x			9	Hit
09/06/25	12:48	Horseshoe	Whipple	Now-1:30pm					Miss
09/18/25	15:01	Apache	Henz	Now-4:30pm	x			20	Hit
09/19/25	11:25	Bartlett	Malloy	Now-1:00pm	x			0	Hit
09/19/25	12:29	Bartlett	Whipple	Now-2:00pm	x			0	Hit
09/19/25	8:18	Horseshoe	Malloy	Now-10:15am	x			17	Hit
09/19/25	5:38	Pleasant	Malloy	Now-7:15am	x			0	Hit
09/22/25	7:30	Bartlett	Whipple	Now-9:00am	x			8	Hit
09/25/25	12:49	Apache	Whipple	Now-3:00pm					Miss
09/26/25	9:44	Apache	Malloy	Now-6:00pm		x		11	Hit
09/26/25	9:44	Bartlett	Malloy	Now-6:00pm			x	420	Hit
09/26/25	9:44	Canyon	Malloy	Now-6:00pm		x		11	Hit
09/26/25	9:44	Horseshoe	Malloy	Now-6:00pm			x	180	Hit

TABLE C-1: MSP Lake Alerts Issued - Monsoon 2025									
Statement Details					Observations			Lead Time	Verification
Date	LST	Lake	Forecaster	Valid Time	Lightning	Wind ≥30mph	Hail/Heavy Rain	1st Obs.	Hit/Miss
09/26/25	9:44	Pleasant	Malloy	Now-6:00pm	x			16	Hit
09/26/25	9:44	Saguaro	Malloy	Now-6:00pm	x			0	Hit

APPENDIX D: QPF STORM TOTAL PRECIPITATION – VERIFICATION TABLES

TABLE D-1: This table shows each of the individual MSP Message Alerts issued during Monsoon 2025 including the detailed forecast rainfall information. The table is broken down by statement Details, observations, and verification. The columns from left to right are defined as follows:

Statement Details – Message information including date and forecast zone. Data is pulled directly from issued Message.

Peak Storm Total Precipitation – Rain information including forecast (QPF), observed (ALERT), radar estimated (GAQPE), and local storm report total (LSR). Data is pulled directly from issued Message. Observations are gathered from the ALERT database, Vieux & Associates radar products, and NWS local storm reports.

Error – The 25 percent error threshold range based on both the QPF STP lower and upper range values, as previously discussed in the [MSP Verification Metrics and Criteria](#) section of this report.

Verification – Hits and misses were assigned based on thresholds previously discussed in the [MSP Verification Metrics and Criteria](#) section of this report.

TABLE D-1: MSP QPF Peak Storm Total Rainfall Verification - Monsoon 2025										
Statement Details		Peak STP (in)					25% Error Threshold Range			Verification
Date	MSP Forecast Zone	QPF (LT)	QPF (UT)	ALERT	GAQPE (Max)	LSRs	QPF (LT)	QPF (UT)	LSRs	Hit/Miss
07/02/25	Palo Verde	0.50	1.25	0.47	1.00		0.38	1.56		Hit
07/02/25	West Valley	0.50	1.50	0.71	1.85		0.38	1.88		Hit
07/02/25	Gila River	0.50	1.25	0.12	0.62		0.38	1.56		Hit
07/02/25	Rainbow Valley	0.50	1.25	1.07	1.67		0.38	1.56		Miss
08/14/25	New River/Cave Creek	0.50	1.50	1.26	1.40		0.38	1.88		Hit
08/14/25	Northwest Valley	0.50	1.50	0.24	1.40		0.38	1.88		Hit
08/14/25	Scottsdale South	0.50	1.50	0.31	0.40		0.38	1.88		Hit
08/14/25	Phoenix North	0.50	1.50	0.94	2.75		0.38	1.88		Miss
08/15/25	Upper Centennial	0.50	1.00	0.39	0.66		0.38	1.25		Hit
08/15/25	Gila River	0.50	1.50	0.52	1.60		0.38	1.88		Hit
08/15/25	Southeast Valley	0.50	1.50	0.28	1.40		0.38	1.88		Hit

TABLE D-1: MSP QPF Peak Storm Total Rainfall Verification - Monsoon 2025										
Statement Details		Peak STP (in)					25% Error Threshold Range			Verification
Date	MSP Forecast Zone	QPF (LT)	QPF (UT)	ALERT	GAQPE (Max)	LSRs	QPF (LT)	QPF (UT)	LSRs	Hit/Miss
08/15/25	Gila Bend	0.25	1.25	0.43	1.60		0.19	1.56		Miss
08/21/25	Phoenix North	0.50	1.00	0.08	0.42		0.38	1.25		Hit
08/21/25	Phoenix South	0.50	1.00	0.39	0.60		0.38	1.25		Hit
08/21/25	Phoenix South	0.50	1.00	0.31	0.60		0.38	1.25		Hit
08/21/25	East Valley	0.50	1.00	0.31	0.55		0.38	1.25		Hit
08/21/25	Superstition	0.50	1.00	0.67	1.00		0.38	1.25		Hit
08/21/25	Lower Salt River Lakes	0.50	1.00	0.24	1.20		0.38	1.25		Hit
08/25/25	Wickenburg	0.50	2.00	0.04	0.80		0.38	2.50		Hit
08/25/25	Upper Centennial	0.50	2.00	0.80	0.95		0.38	2.50		Hit
08/25/25	Phoenix North	0.50	1.25	0.55	0.77		0.38	1.56		Hit
08/25/25	Phoenix South	0.50	1.25	1.14	1.25		0.38	1.56		Hit
08/25/25	East Valley	0.50	1.25	0.83	0.95		0.38	1.56		Hit
08/25/25	New River/Cave Creek	0.50	1.25	0.59	0.78		0.38	1.56		Hit
08/25/25	Southeast Valley	0.50	1.25	0.75	0.75		0.38	1.56		Hit
08/25/25	Scottsdale South	0.50	1.25	0.16	0.45		0.38	1.56		Hit
08/26/25	Phoenix North	0.50	1.25	1.07	0.60		0.38	1.56		Hit
08/26/25	Phoenix South	0.50	1.25	0.91	0.70		0.38	1.56		Hit
08/26/25	Upper Centennial	0.50	2.00	0.75	1.20		0.38	2.50		Hit
09/02/25	Gila Bend	0.50	1.25	0.20	0.50		0.38	1.56		Hit
09/03/25	Phoenix South	0.50	1.25	0.98	1.50		0.38	1.56		Hit
09/03/25	Scottsdale South	0.50	1.25	0.71	1.01		0.38	1.56		Hit
09/03/25	Phoenix North	0.25	1.00	0.16	0.84		0.19	1.25		Hit
09/03/25	Phoenix South	0.25	1.00	0.47	0.84		0.19	1.25		Hit
09/03/25	East Valley	0.50	1.50	0.59	1.19		0.38	1.88		Hit
09/03/25	Gila River	0.50	1.50	0.75	1.32		0.38	1.88		Hit
09/03/25	Southeast Valley	0.50	1.50	0.51	0.68		0.38	1.88		Hit
09/03/25	Phoenix North	0.50	1.25	1.38	1.60		0.38	1.56		Miss
09/03/25	Northwest Valley	0.50	1.00	0.67	1.40		0.38	1.25		Miss
09/04/25	West Valley	0.50	1.00	0.83	1.11		0.38	1.25		Hit
09/04/25	Palo Verde	0.50	1.00	1.02	1.34		0.38	1.25		Miss
09/05/25	Wickenburg	0.50	2.00	0.04	0.60		0.38	2.50		Hit

TABLE D-1: MSP QPF Peak Storm Total Rainfall Verification - Monsoon 2025										
Statement Details		Peak STP (in)					25% Error Threshold Range			Verification
Date	MSP Forecast Zone	QPF (LT)	QPF (UT)	ALERT	GAQPE (Max)	LSRs	QPF (LT)	QPF (UT)	LSRs	Hit/Miss
09/05/25	New River/Cave Creek	0.50	2.00	0.00	0.14		0.38	2.50		Miss
09/05/25	Northwest Valley	0.50	2.00	0.00	0.25		0.38	2.50		Miss
09/05/25	Upper Centennial	0.50	2.00	0.16	0.30		0.38	2.50		Miss
09/06/25	Upper Centennial	0.50	1.25	0.28	1.20		0.38	1.56		Hit
09/19/25	New River/Cave Creek	0.50	1.25	0.95	1.25		0.38	1.56		Hit
09/19/25	Scottsdale North	0.50	1.25	0.55	1.15		0.38	1.56		Hit
09/19/25	Scottsdale North	0.25	0.75	0.36	0.90		0.19	0.94		Hit
09/19/25	Phoenix North	0.25	0.75	0.59	0.60		0.19	0.94		Hit
09/19/25	Scottsdale North	0.25	0.75	0.24	0.50		0.19	0.94		Hit
09/19/25	New River/Cave Creek	0.50	1.25	0.47	1.65		0.38	1.56		Miss
09/26/25	Upper Centennial	0.50	1.00	0.36	0.70		0.38	1.25		Hit
09/26/25	Northwest Valley	0.50	1.50	0.98	1.10		0.38	1.88		Hit
09/26/25	West Valley	0.50	1.75	1.34	1.42		0.38	2.19		Hit
09/26/25	Lower Salt River Lakes	0.75	2.00	0.51	1.80		0.56	2.50		Hit
09/26/25	Southeast Valley	0.75	2.00	1.14	2.05		0.56	2.50		Hit
09/26/25	Superstition	0.75	2.00	1.41	1.80		0.56	2.50		Hit
09/26/25	East Valley	0.50	1.75	1.93	1.97		0.38	2.19		Hit
09/26/25	Scottsdale North	0.75	2.00	1.38	1.80		0.56	2.50		Hit
09/26/25	Scottsdale South	0.75	2.00	1.57	1.60		0.56	2.50		Hit
09/26/25	Wickenburg	0.50	1.50	0.31	1.15		0.38	1.88		Hit
09/26/25	New River/Cave Creek	0.75	2.00	1.06	1.40		0.56	2.50		Hit
09/26/25	Phoenix North	0.75	2.00	1.14	1.60		0.56	2.50		Hit
09/26/25	Phoenix South	0.75	2.00	1.06	1.80		0.56	2.50		Hit
09/26/25	West Valley	0.75	2.00	1.06	2.00		0.56	2.50		Hit
09/26/25	Northwest Valley	0.75	2.00	1.50	2.30		0.56	2.50		Hit
09/26/25	Wickenburg	0.50	1.00	0.12	0.20		0.38	1.25		Miss
09/26/25	Phoenix South	0.50	1.75	1.89	2.40		0.38	2.19		Miss
09/26/25	Rainbow Valley	0.50	1.75	0.75	3.10		0.38	2.19		Miss
09/27/25	New River/Cave Creek	0.50	1.50	0.71	1.07		0.38	1.88		Hit
09/27/25	Scottsdale South	0.50	1.50	0.86	0.90		0.38	1.88		Hit
09/27/25	Phoenix North	0.50	1.50	0.83	1.20		0.38	1.88		Hit

TABLE D-1: MSP QPF Peak Storm Total Rainfall Verification - Monsoon 2025										
Statement Details		Peak STP (in)					25% Error Threshold Range			Verification
Date	MSP Forecast Zone	QPF (LT)	QPF (UT)	ALERT	GAQPE (Max)	LSRs	QPF (LT)	QPF (UT)	LSRs	Hit/Miss
09/27/25	Upper Centennial	0.50	1.50	0.63	0.92		0.38	1.88		Hit
09/27/25	Palo Verde	0.50	1.50	0.35	0.80		0.38	1.88		Hit