

Phoenix Trails and Heat Safety Trail Closure Program Review

Phoenix Parks and Recreation Board
October 24, 2024

Phoenix Trails and Heat Safety Policy Review

Policy Time Frame:

- Year round, on Heat Warning days

On NWS issued Heat Warning days:

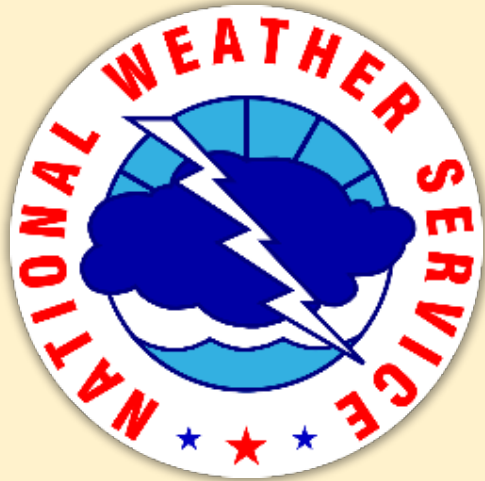
- Trail access restricted from 9 a.m. to 5 p.m.

Trail restrictions at these two locations:

- Camelback Mountain Preserve
 - Echo Canyon Trail
 - Cholla Trail
- Phoenix Mountains Preserve - Piestewa Peak
 - Summit Trail and associated trails



How potential trail closures are tracked and implemented



Excessive Heat
Warning
Issued

City
Communicates
Closure

Trailheads are
closed from
9 am – 5 pm

[weather.gov/psr/](https://www.weather.gov/psr/)

2024 Summer Months

May

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

June

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

July

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

August

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

September

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	31			

2024 Summer Months and Trail Restriction Days

May


S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

June

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

July

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

 Trail restriction days
(NWS Heat Warning Days)
– 45 total days

August

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

September

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	31			

2024 Summer Months ≥ 110 , No Heat Warning

May


S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	


June

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

July

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

 Trail restriction days
(NWS Heat Warning Days)
– 45 total days

 Days that were 110 or greater
and not NWS Heat Warning Days
– 33 total days

Temperatures on these 33 days
ranged as follows:

110 – 12 days

111 – 8 days

112 – 7 days

113 – 5 days

114 – 1 day

August

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

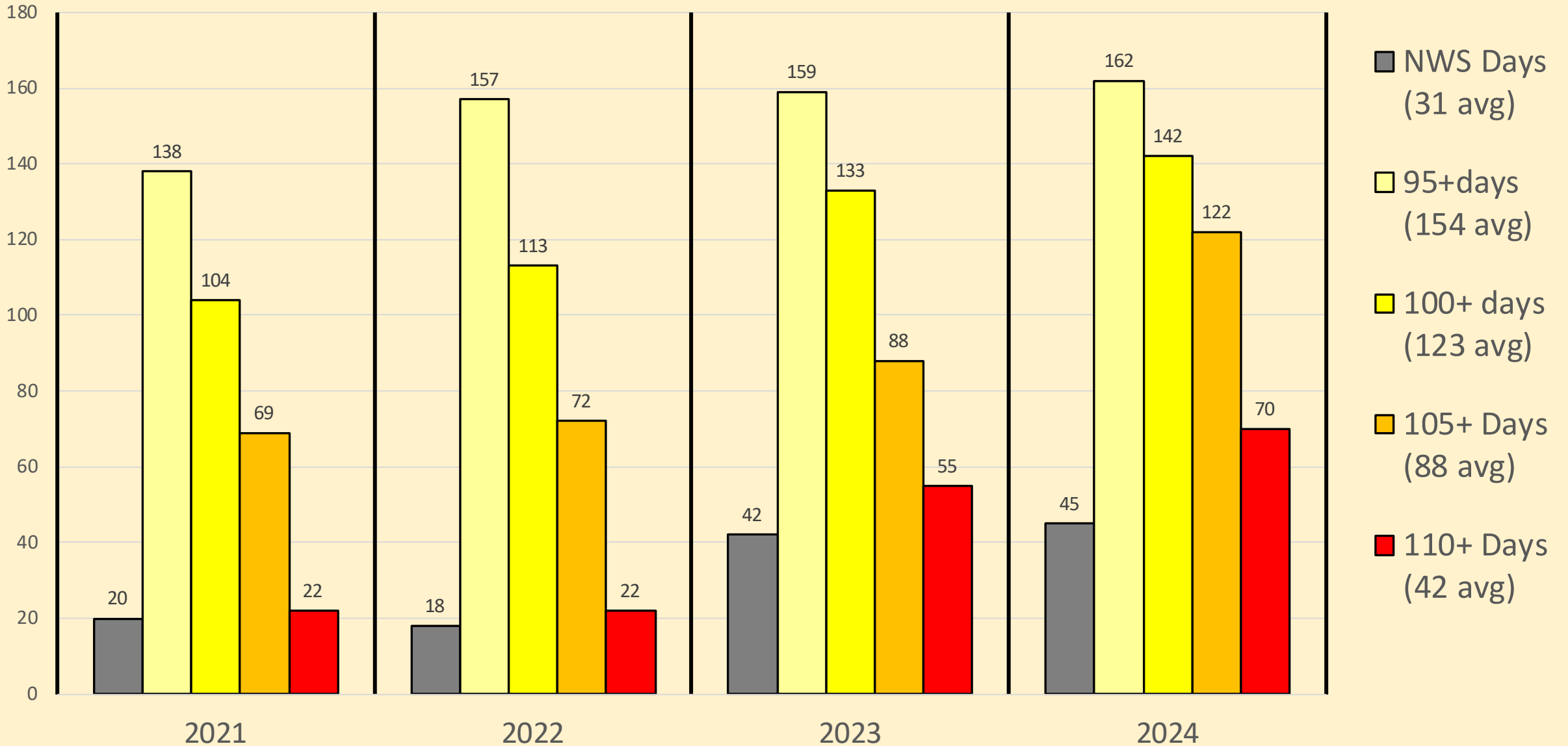
September

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	31			

2021 to 2024 Heat Warning Days and Temperatures



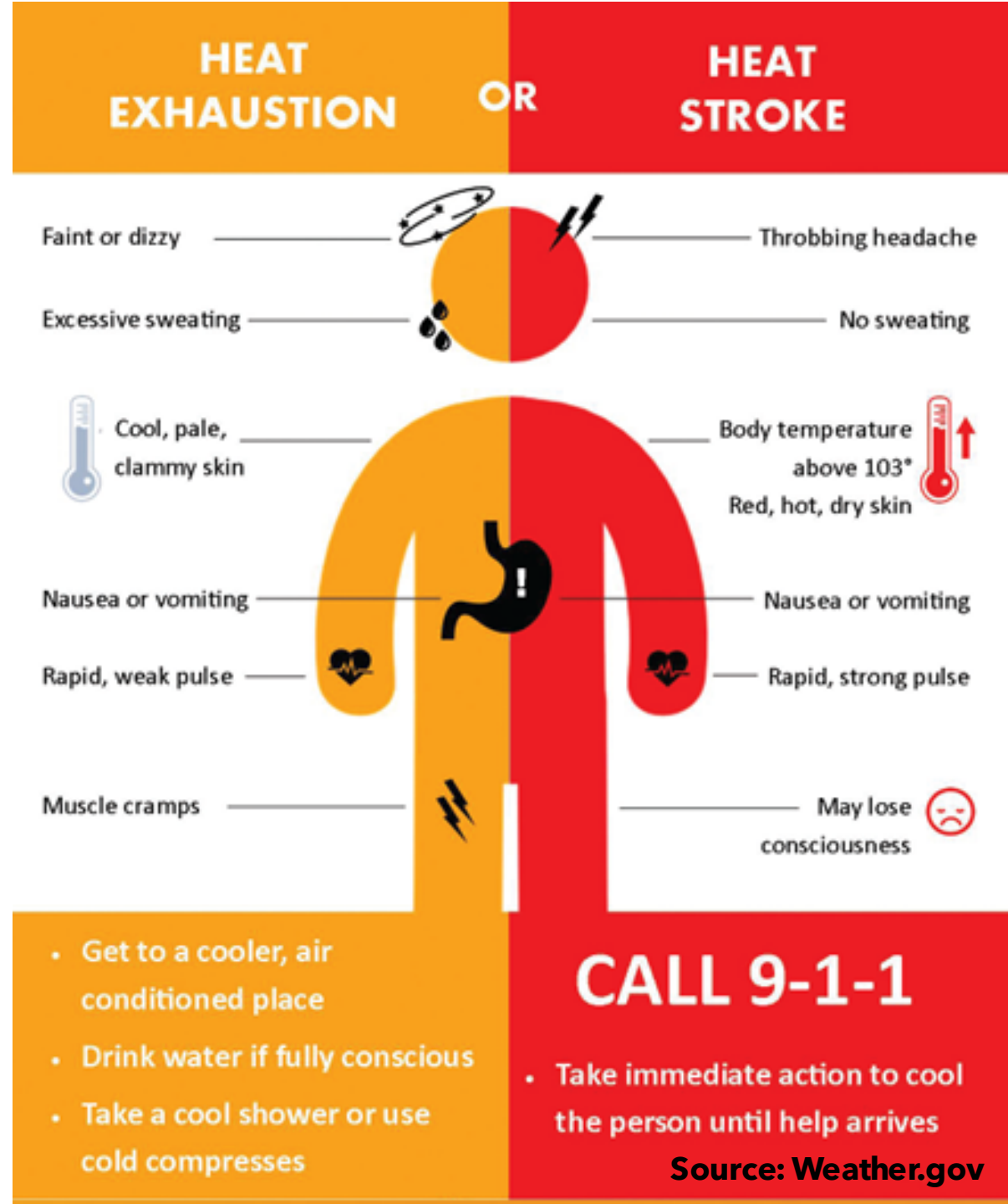


Goal: Identify mountain closures and temperature limits to reduce mountain rescues and risk of heat related illness, while still allowing safe use of the mountain trails.

Data Review: Mountain rescues and visitor counts were reviewed for the top 4 mountain ranges in Phoenix. Additional considerations were extreme heat closure days and the historical high and average temperatures for each day (NWS).



Heat Exhaustion vs. Heat Stroke

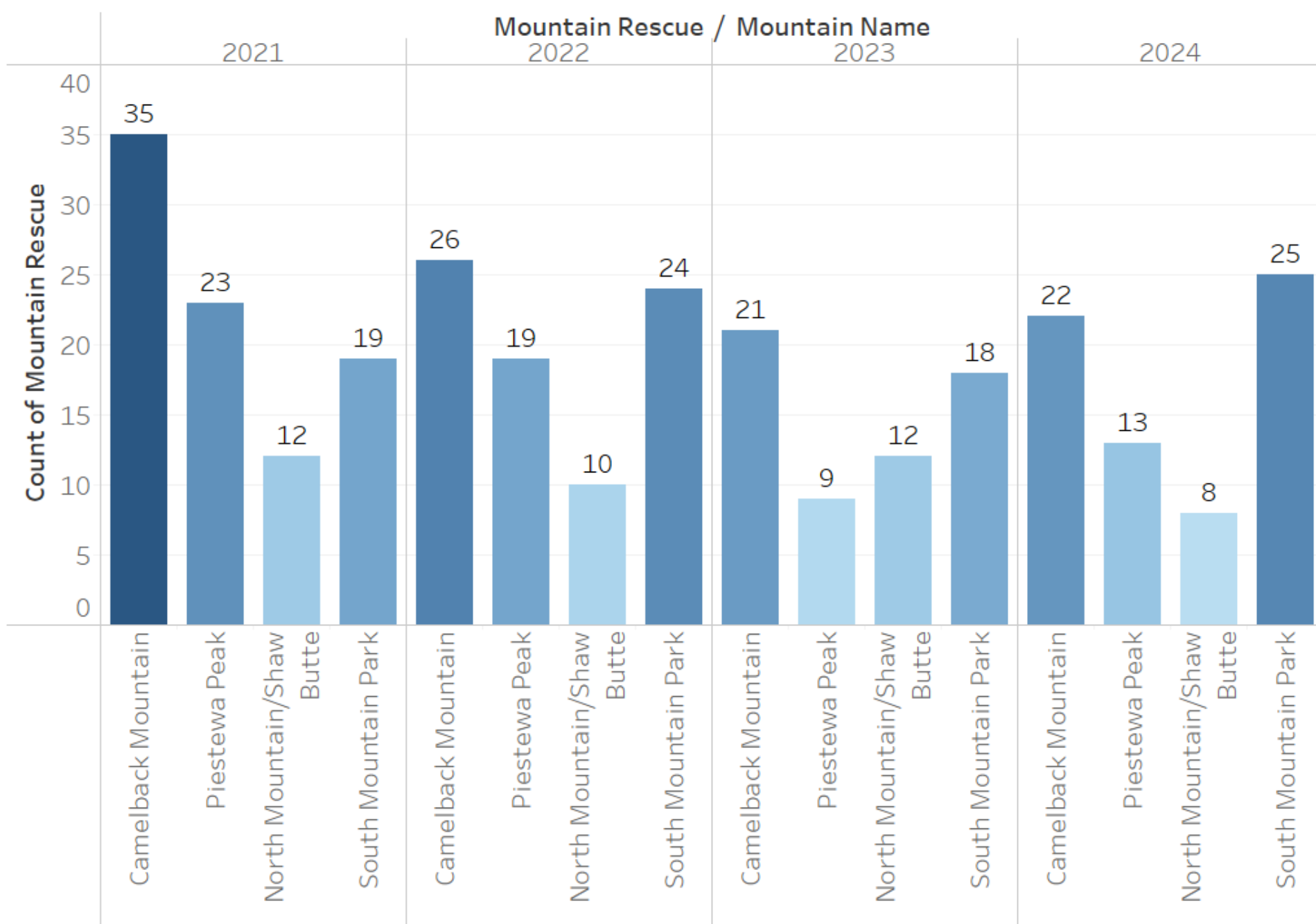


Mountain Calls by Year

May 1 - September 30



Phoenix Mountain Calls



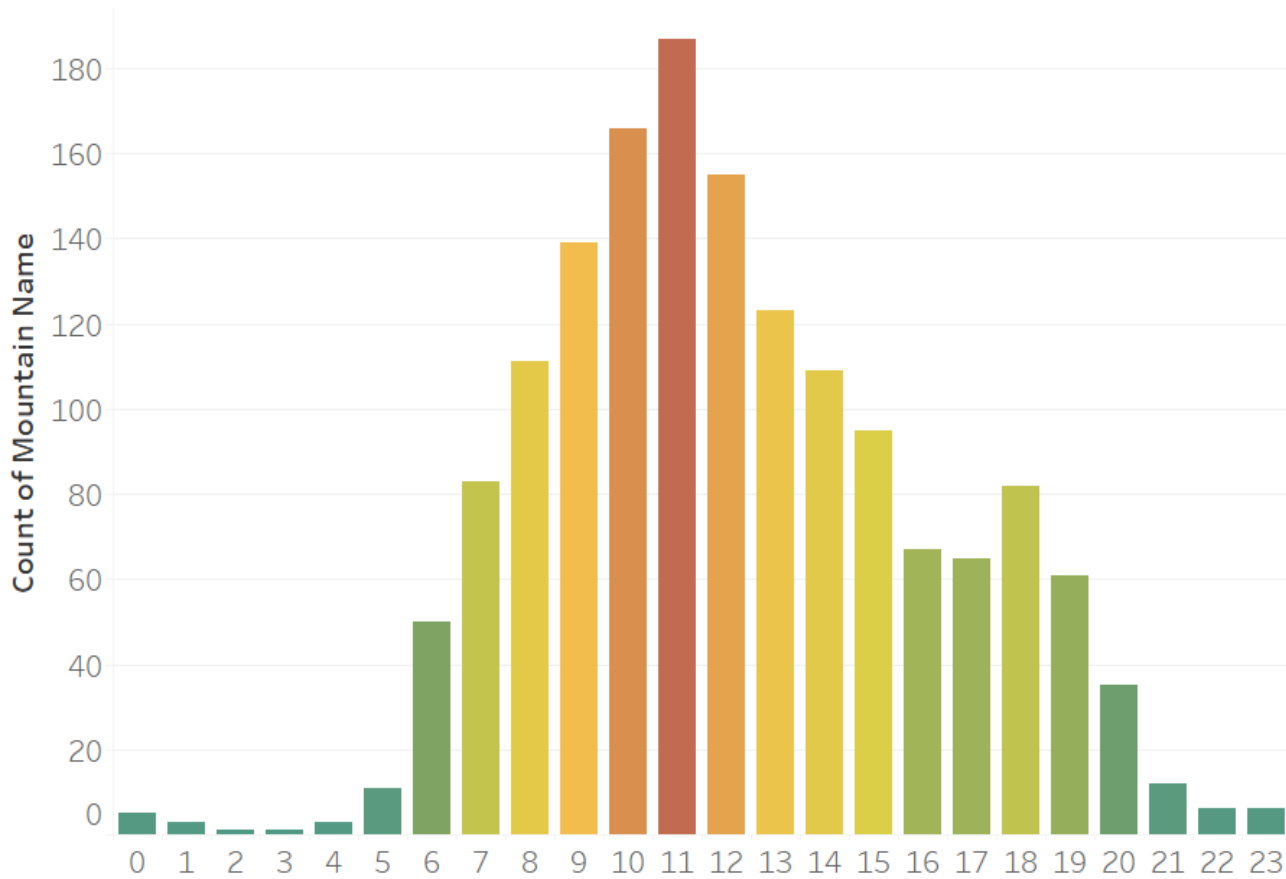
Mountain Calls by Hour 2021-2024/May-Sept

Mountain Name	Mountain Rescue																					
Camelback Mountain																		104				
				1	3	6	3	7	18	17	7	17	6	7	5	1	1	1	2	2		
Piestewa Peak																		64				
		1	1	2	6	5	8	7	4	8	6	1	4	2		1	2	3	2		1	
North Mountain/Shaw Butte																		42				
			1		4	4	4	6	3	3	1	1	2	1	2	1	3	4	1		1	
South Mountain Park																		86				
	1	1		2	6	5	13	4	8	6	10	8	2	5	2	1	3	5	3	1		
	0	1	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	Grand Total
Hours included in trail closure days																						

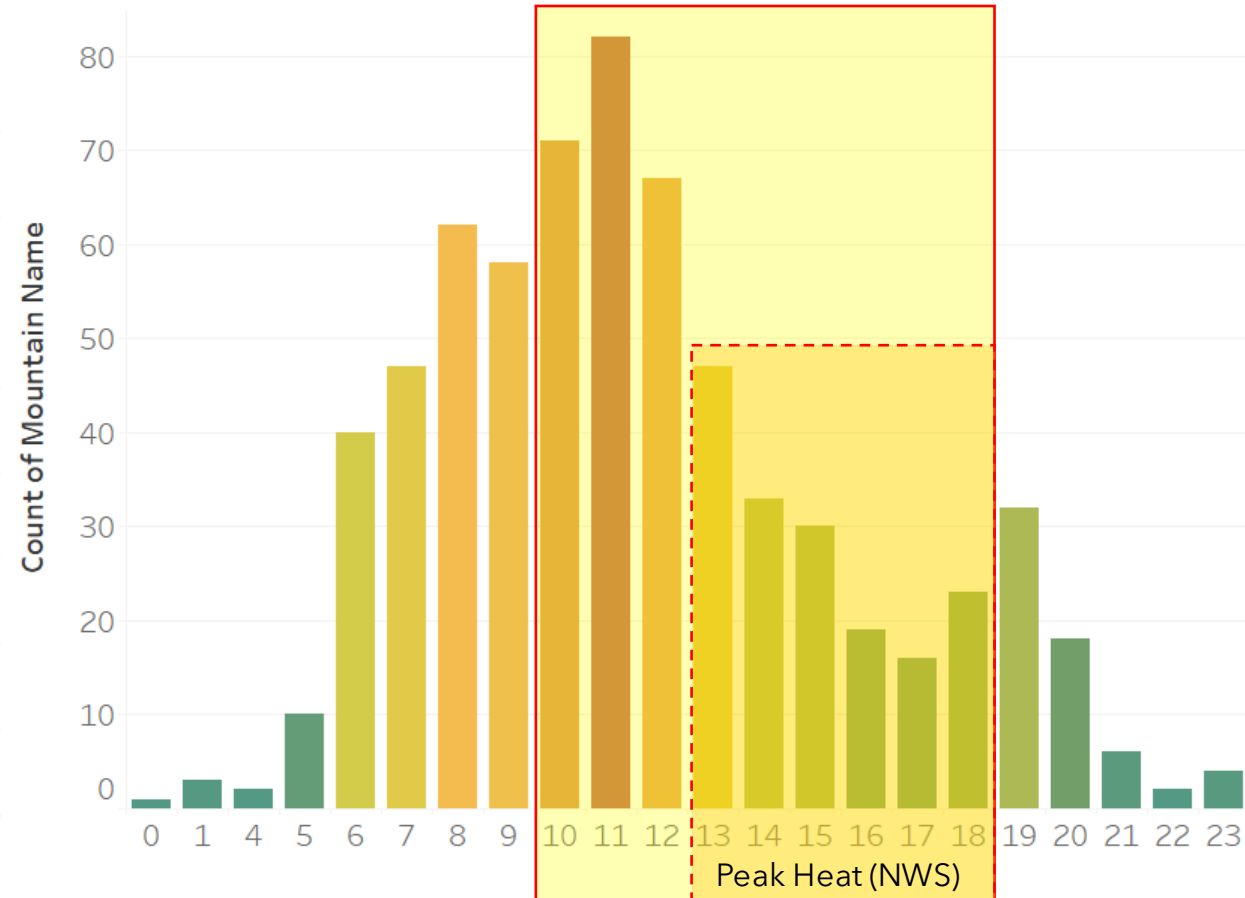


Mountain Calls by Hour Combined 2021-2024

January - December



May - September

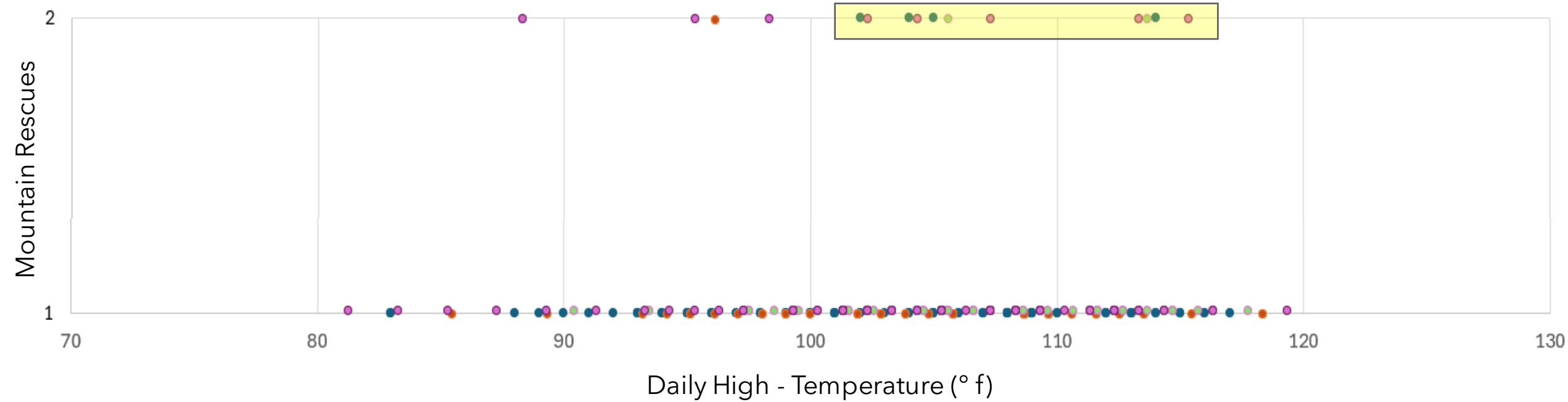


High Risk of Heat Related Illness (NWS)

Peak Heat (NWS)



Mountain Rescues vs Temperature



- Camelback
- Piestewa
- North Mountain/Shaw Butte
- South Mountain



Park Visitors

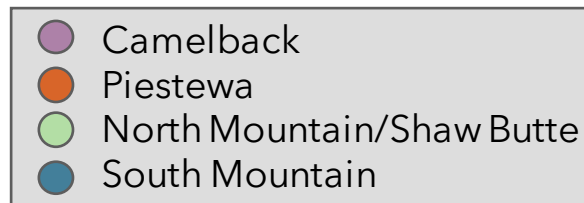
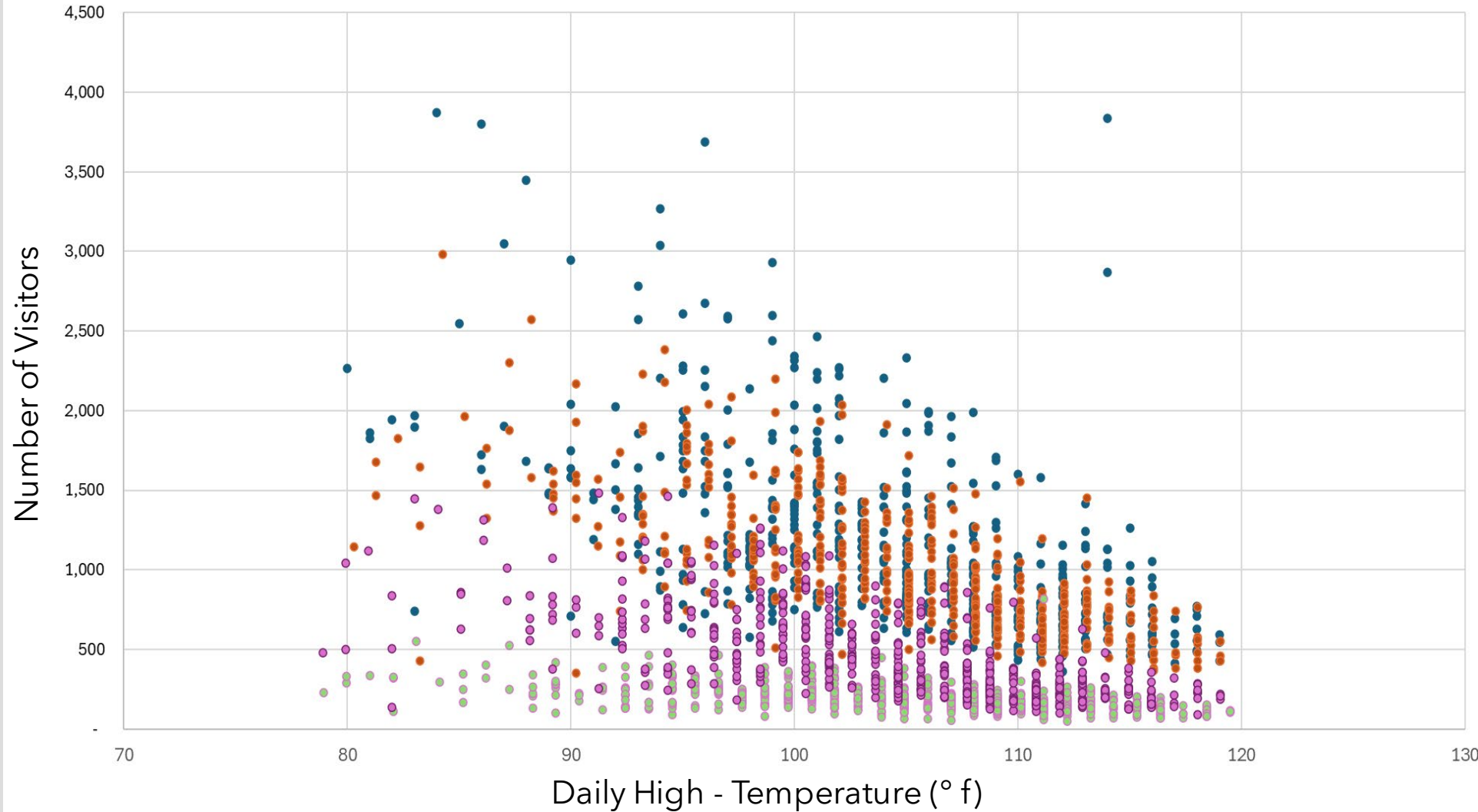
COP Parks and Rec visitor counts for:

- Camelback
- Piestewa Peak
- N. Mountain/Shaw Butte
- S. Mountain



Phoenix Mountain Park Visitors

Park Visitors vs Temperature



Combining the Data (based on 2021-2024 trends)

The highest risk reduction model:

- Closing Camelback, Piestewa Peak, North Mountain and South Mountain
- When the temperature reaches 95 degrees
- Between the hours of 8 am - 7 pm

Will reduce the number of mountain rescues by about 50%

A reasonable risk reduction model:

- Closing Camelback, Piestewa Peak, and South Mountain
- When the temperature reaches 105 degrees
- Between the hours of 8 am - 5 pm

Will reduce the number of mountain rescues by almost 30%



Policy modification request



Current:

Close trails from 9 a.m. to 5 p.m. at Camelback Mountain Preserve- Echo Canyon and Cholla Trail, and all associated trails and trailheads at Phoenix Mountains Preserve - Piestewa Peak when the National Weather Services Issues Excessive Heat Warning Days.

2024 Proposed Changes:

Add the closure of trails at South Mountain Park / Preserve

Begin closures at 8 a.m.

Thank You

