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To: Sheriff Sickler
Re: Response to Your Request that We Analyze Patrol Staffing Adequacy
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Patrol Staffing Study

“Do we have enough police officers on duty?” and “Do we really need that many officers on duty?” are two questions often asked of those tasked with meeting a community’s needs while simultaneously also tasked with managing a community’s fiscal resources.

Those two questions can’t be answered with a simple yes or no. Though there are various models for benchmarking law enforcement staffing, all are known to have their shortcomings. Moreover, there are distinct differences between incorporated areas and unincorporated areas and the models are more applicable to incorporated areas.

Additionally, any attempt to answer the question of whether staffing is sufficient will depend on each individual’s perspectives on the desired level of customer service (in this situation, measured by response time and number of deputies responding to a call for service) and willingness to pay (In this situation, how much are we willing to pay in taxes for increased customer service).

Since we can’t provide a simple answer to the question of whether the current staffing level is adequate, instead, this report will:

- Provide a brief overview of research regarding approaches to determining staffing models;
- Provide data regarding the extent to which Patrol shifts are staffed in accordance to its existing staffing model and the causes that result in Patrol shifts being staffed below the existing staffing model;
- Provide response time data for Type 1 calls; and
- Provide data regarding the use of deputy time while on duty.

Approaches to determining staffing models

The International City/County Management Association (ICMA) white paper “An analysis of police department staffing: How many officers do you really need?” provides some insights into five commonly used staffing models. To summarize what the white paper reports:

1. **Crime Trends:** Crime rates are influenced by many factors and many criminologists discount the role officers play in lowering crime rates. Therefore, the researchers do not find the use of crime trends to develop staffing models to be an appropriate approach to staffing.
2. **Per-Capita:** Though simple and easy to understand, variables such as demographic characteristics of a community, population density, and type of community reduce the utility of an across-the-board approach to staffing. The white paper reports that the International Association of Chiefs of Police does not recommend this model be used to determine staffing levels.
3. **Minimum-Staffing levels:** The approach of setting minimum on-duty limits and then bringing in officers to work overtime as needed to ensure a shift does not go below the minimum is generally driven by collective bargaining agreements and past practices. As such, minimum manning levels may not be based on needs.
4. **Authorized/budgeted levels:** This is basically a “what can we afford” approach and therefore is not considered to be a sound foundation on which to make staffing decisions.
5. **Workload-based models:** Despite its limitations, the International City/County Management Association (ICMA) is a strong advocate of this approach because it attempts to match the supply of police resources to the demand for police services.

The ICMA’s research and analytical work has led it to develop staffing allocation and deployment guidelines which it refers to as “The Rule of 60.” One part of the Rule of 60 holds that the average workload for patrol staffing should not exceed 60%. In other words, an officer should spend no more than 60% of their time responding to calls for service. The remaining 40% allows for proactive enforcement and community policing. The ICMA research suggests that once the 60% threshold is passed, an officer will no longer engage in proactive policing when not on a call for service. The reason is that the officer’s mindset will shift to expecting, preparing for, and waiting for the next call for service rather than attempting to engage in proactive policing.

Jackson County Patrol Division – Assignments Other Than General Patrol

The Patrol Division consists of many subunits, some of which have specific funding sources and assignments other than the general patrol of the county’s unincorporated areas. These subunits operate in addition to the general patrol force and consist of the following:

- **Shady Cove –** The City of Shady Cove contracts with the S.O. for patrol services. The contract is for 2.75 Deputies and .48 of a Community Services Officer position not to exceed 128 hours a week. There is not 24/7 coverage.

- White City – The White City Enhanced Law Enforcement District is funded by the citizens of White City. The S.O. has 6 deputies budgeted to provide services in the District. When fully staffed, there would be 1-2 deputies on duty at all times.
- Special Services
 - Traffic – When fully staffed there would be one deputy assigned to Traffic duty at all times. The Traffic Deputy’s primary responsibilities are to respond to and investigate collisions, serve as members of the Serious Traffic Accident Reconstruction (STAR) team, and enforce motor vehicle laws.
 - Community Oriented Policing (COPS) – 2 deputies are assigned to address calls for service by using Problem Oriented Policing and creating partnerships in the community.
 - Schools – 1 deputy is assigned to work directly with local schools.
 - Parks – 1 deputy is assigned to work with the Parks Program on the Greenway.
- K9 Teams - There are 3 canine handlers. These deputies are assigned to patrol shifts and operate like all other patrol deputies with the exception that they will be called away from their regular duties when dogs are needed to assist in a search.
- Other – Most deputies have specialized training in one or more of the following areas, and may be called away from patrol when their special training is needed: SWAT, Crisis Negotiating, Lethal Threat, Emergency Vehicle Operation Course training, Illegal Marijuana Enforcement Team, or Honor Guard.

The Existing Jackson County General Patrol Staffing Model

General patrol accounts for the remaining assignments within the Patrol Division. General patrol operates 24 hours a day, 7 days a week and is assigned the tasks of patrolling and responding to calls for service in the unincorporated areas of the County.

When fully staffed, general patrol would have 24 FTE comprised of 16 deputies, 4 corporals, and 4 sergeants. General patrol is divided into 4 teams. There is one team on patrol duty at all time. When on duty, a team provides coverage for a 12-hour period that will be either from 6am to 6pm or from 6pm to 6am. This staffing pattern remains constant. There aren’t more deputies assigned during nights or on weekends than on other days. The team assignments are as follows:

Team 1	Days, Sunday - Wednesday
Team 2	Nights, Sunday - Wednesday
Team 3	Days, Thursday - Saturday
Team 4	Nights, Thursday - Saturday

Each team is staffed with 4 deputies, 1 corporal, and 1 sergeant. Of the 4 deputies, 2 will be assigned to patrol the south side of the county and 2 to patrol the north side. The corporal covers both north and south as needed. The two sides will support each other and respond to calls in the other side of the county based on availability and location at the time. The sergeant serves as a working supervisor,

and is also available to respond to calls, but was not counted as an active patrol deputy for purposes of this analysis.

Within each 2-week (80 hour) pay period, the individual employee will work the 12-hour period on 6 days and on a 7th day will only work 8 hours instead of 12.¹ Because of this staffing model, there will always be a certain number of hours in which patrol is not staffed at its intended level of having 4 deputies, 1 corporal, and 1 sergeant on duty at all times.

Data regarding the extent to which patrol coverage conforms with the staffing model

This section discusses the number of times there are less patrol deputies on patrol than the number assigned to be on patrol at that time.

As stated above, there are some hours a team will be short staffed because it is a deputy’s day to only work 8 hours. Additionally, if there is a vacancy or an assigned employee is unavailable for any reason (e.g., sick, vacation, training, etc.) they will be short-staffed. They generally do not bring in a replacement. The jail has minimum staffing levels and will call in another deputy to cover a shift, but patrol does not.

We analyzed data for two separate months to understand how often general patrol is fully staffed with 4 deputies and a corporal. We excluded the sergeant from our analysis as that position’s role is focused on administration and oversight and therefore the sergeant generally does not respond to calls for service.

For our sample, we selected one winter month (January 2022) and one summer month (August 2021). 28 days from each month were included in our sample in order to align with the county’s pay periods and time recording system.

We used each hour as our unit of measurement. Each month’s analysis included 672-hour long periods (24 hrs. x 28 days). Of these, general patrol was fully staffed with four deputies and one corporal for 19% of the hours in August 2021 and 12% in January 2022. For the remaining hours, one or more employees were not on duty. The table below gives a more detailed breakdown.

**Percent of Hours and Number of Deputies/Corporal on Patrol
August 2021 and January 2022**

Number of Deputies on Duty including the Corporal	Percent of August 2021 Hours	Percent of January 2022 Hours
5 (fully staffed)	19%	12%
4 (short 1)	52%	17%
3 (short 2)	26%	46%
2 (short 3)	3%	21%
1 (short 4)	0%	3%

¹ (6 days * 12 hours) + (1 day * 8 hours) = 80 hours

Causes of Why Shifts are Understaffed

Vacancies accounted for the largest number of unstaffed hours. A vacancy is defined as a budgeted position that is temporarily unfilled because an employee has left the organization and has not yet been replaced. Given the training requirements and extensive background checks that must occur, it can take the Sheriff's Office a long time to fill a vacant position.

Multiplying the 672 hours (28 days x 24 hrs) by the 5 deputies (including the corporal) assigned to be on duty results in a total of 3,360 staffing hours in the period. Of these 3,360 staffing hours, deputies were on duty in August for 2,555 hours (75%) and 2,085 hours (62%) in January.

The chart below details the number of hours general patrol was short staffed due to vacancies and for other reasons.

Reasons Why Less than 4 Deputies and a Corporal were on Duty

Unstaffed Hours Due To:	Aug 2021	January 2022
Vacancies	320 hours	640 hours
Vacation/comp time	321 hours	89 hours
Due to employee scheduled to work 8-hour shift	160 hours	160 hours
Sick/FMLA/OFLA	6 hours	384

The 384 unstaffed hours in January 2022 resulting from Sick/FMLA/OFLA leave was an anomaly, which was likely due to COVID-19. In Aug 2021 only 6 hours were unstaffed due to Sick/FMLA/OFLA. For another comparative period, we looked at February 2020 (prior to COVID-19) and found the 4 patrol teams had a combined total of 32 hours of sick time.

As indicated above, vacancies were the largest contributor to unstaffed hours. Filling a vacant position for a sworn peace officer can be a lengthy process given the extensive background check that must occur and other related requirements. The time to fill a vacancy and have the new deputy able to perform solo patrol duty will depend on whether the individual is new to law enforcement, a jail deputy transferring to the criminal division, or a lateral hire (i.e., an individual already working as a sworn officer for a different jurisdiction). Data for new hires in FY20-21 suggests that a vacant position will remain vacant for between 1 and 3 months. Additionally, if the Sheriff's Office had to hire a person new to law enforcement, that individual's first six months would be spent at the academy and then additional time would be spent doing field training (i.e., patrolling with an experienced duty rather than patrolling solo). Similarly, a sworn deputy transferring from the jail division to the criminal division would need field training.

Type 1 Call Response Times

This section discusses the correlation between the number of deputies on duty and the time it takes to respond to a priority 1 call.

Citizen calls to dispatch are assigned a priority number, with Priority 1 calls requiring an immediate response (e.g., a life-threatening situation) and Priority 5 being the lowest priority.

We analyzed response time data for the two months in our sample to understand the relationship between staffing levels and response times. It would seem logical that having more staff on duty would reduce response times. Oddly, that wasn't the case.

Our analysis found there was no clear correlation between response times and the number of deputies on duty. The *average* response time to a Priority 1 call was fastest when 5 deputies (including the corporal) were on duty but the pattern didn't continue when we reviewed the times when there were 4 deputies on duty, 3 deputies, and 1 or 2 deputies. As seen below, quicker responses occurred when 1 or 2 deputies were on duty than when 3 or 4 were on duty.

**Priority 1 Calls
Average Response Times
(In Minutes)**

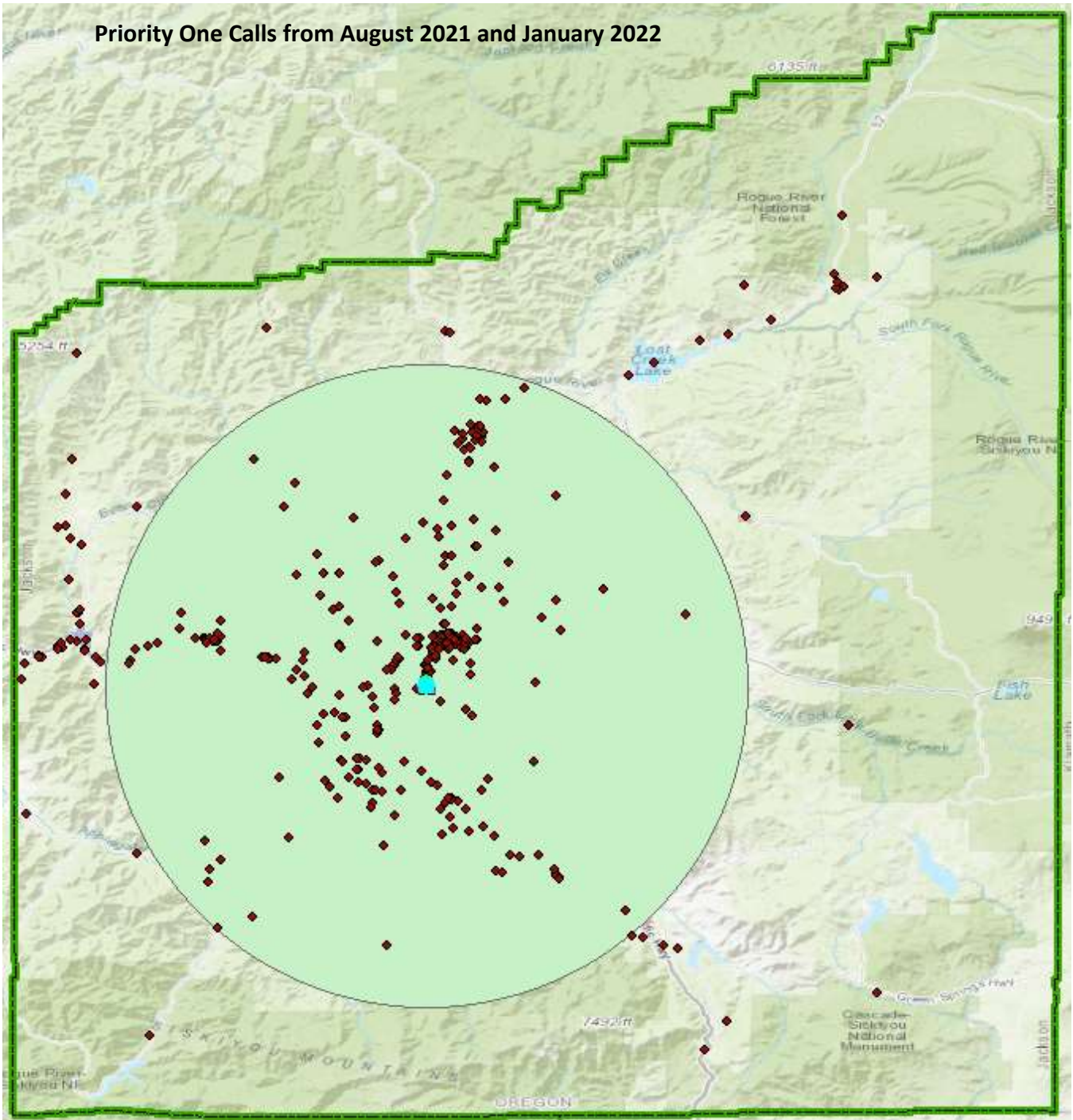
Number of Deputies (including corporal)	Average Response Minutes	Number of Calls in Sample
5 on duty	12.01	64
4 on duty	15.11	160
3 on duty	14.86	153
1 or 2 on duty	14.21	49

A combination of two factors likely explains why there was no clear correlation between the number of deputies on duty and response time. The factors are samples sizes, and outliers. The smaller the sample size, the greater the influence of outliers. The outliers we refer to are the small number of calls originating from the outskirts of the county. We found those calls had a big impact on the averages.

To test this, we re-analyzed the data after segregating calls that were placed from locations 20 miles or more from the Sheriff's Office. Though deputies are on patrol and not stationary, the Sheriff's Office is centrally located. Calls from near Prospect, from past Rogue River, and from areas nearing the California border met the criteria of being farther than 20 miles.

The map on the next page shows all priority one calls for the 2-month period reviewed. The circle distinguishes calls from within 20 miles from those beyond 20 miles. The calls received from locations more than 20 miles out were considered outliers for our review.

Priority One Calls from August 2021 and January 2022



As shown below, we compared response times based on distance and found a big difference between the two groups.

**Comparison of Priority 1 Calls by Distance
Regardless of Number of Deputies on Duty**

	Number of Calls	Average Response Time in Minutes
Calls from Within 20 Miles	364 (85%)	12.74
Calls from Farther than 20 Miles	62 (15%)	24.53
All Calls Combined	426	14.19

We performed the same analytical procedure using Priority 2 response time data. Again, we found that the average response time for calls placed from within 20 miles was significantly quicker than when calls were placed from more than 20 miles away.

**Comparison of Priority 2 Calls by Distance
Regardless of Number of Deputies on Duty**

	Number of Calls	Average Response Time in Minutes
Calls from Within 20 Miles	393	13.94
Calls from Farther than 20 Miles	40	28.06
All Calls Combined	433	15.25

For lower priority calls, the speed of response time is generally not a concern. In fact, for low priority calls the deputy may respond via telephone. Therefore, we saw no benefit in analyzing the data for Priority 3 -5 calls.

Data regarding the use of patrol deputy time

This section discusses how deputies time is used when the deputies are out patrolling.

For our two-month sample, we found that on average when deputies are ‘on the clock’ they spend approximately 71% of their time responding to citizen or self-initiated calls or performing other administrative or out-of-service time work such as training or attending court. This means that approximately 29% of their time is available for proactive patrol. This section discusses the various uses of time when a deputy is on patrol.

Time spent ‘on patrol’ and not performing other duties can be divided into the following categories:

- Responding to a citizen call for service – A citizen calls 911 to request assistance. The 911 center then contacts the deputy. For purposes of this analysis we grouped the time spent traveling to the location and the time at the location together.

- Engaged in a self-initiated service call – A traffic stop is a common example of a self-initiated service call. The self-initiated call may be the result of proactive policing but it is categorized separately for the purpose of distinguishing availability from involvement.
- Proactive patrolling - When not involved in service calls, a deputy's time is available for proactive policing. This includes activities such as driving around the area where a person with a warrant for their arrest is known to spend time, parking near a known drug house to watch for suspicious activity, and driving around to provide a police presence, which is often referred to as community policing.

As discussed in Section 1, the ICMA research suggests that an officer (deputy) should spend no more than 60% of time of their time responding to calls for service. The remaining 40% allows for proactive activities and community policing.

Our analysis indicated that overall, for the two-month period, while on patrol deputies spent 71% of their time on calls for service and 29% on proactive enforcement/community policing.

The charts below provide more in-depth detail.

Patrol Deputy Hours for August 2021

	Hours Responding to Citizen Calls for Service*	Hours Engaged in Self-Initiated Calls*	Out of Service Hours	Total Call Hours & Out of Service	Total Hours Worked	Workload = Total Call Hours & Out of Service / Total Hours	Proactive Activities/ Community Policing Hours (all remaining hours)
Weekday Days	393	39	200	632	939	67%	307
Weekday Nights	293	73	314	680	949	72%	269
Weekend Days	170	10	78	258	341	76%	83
Weekend Nights	107	44	92	243	379	64%	136
Total	964	166	684	1814	2608	70%	794

*based on en route time

Patrol Deputy Hours for January 2022

	Hours Responding to Citizen Calls for Service*	Hours Engaged in Self-Initiated Calls*	Out of Service Hours	Total Call Hours & Out of Service	Total Hours Worked	Workload = Total Call Hours & Out of Service / Total Hours	Proactive Activities/ Community Policing (all remaining hours)
Weekday Days	313	37	180	530	788	67%	258
Weekday Nights	203	103	274	580	744	78%	164
Weekend Days	129	15	56	200	297	67%	97
Weekend Nights	86	36	81	203	285	71%	82
Total	731	191	590	1512	2114	72%	602

*based on en route time