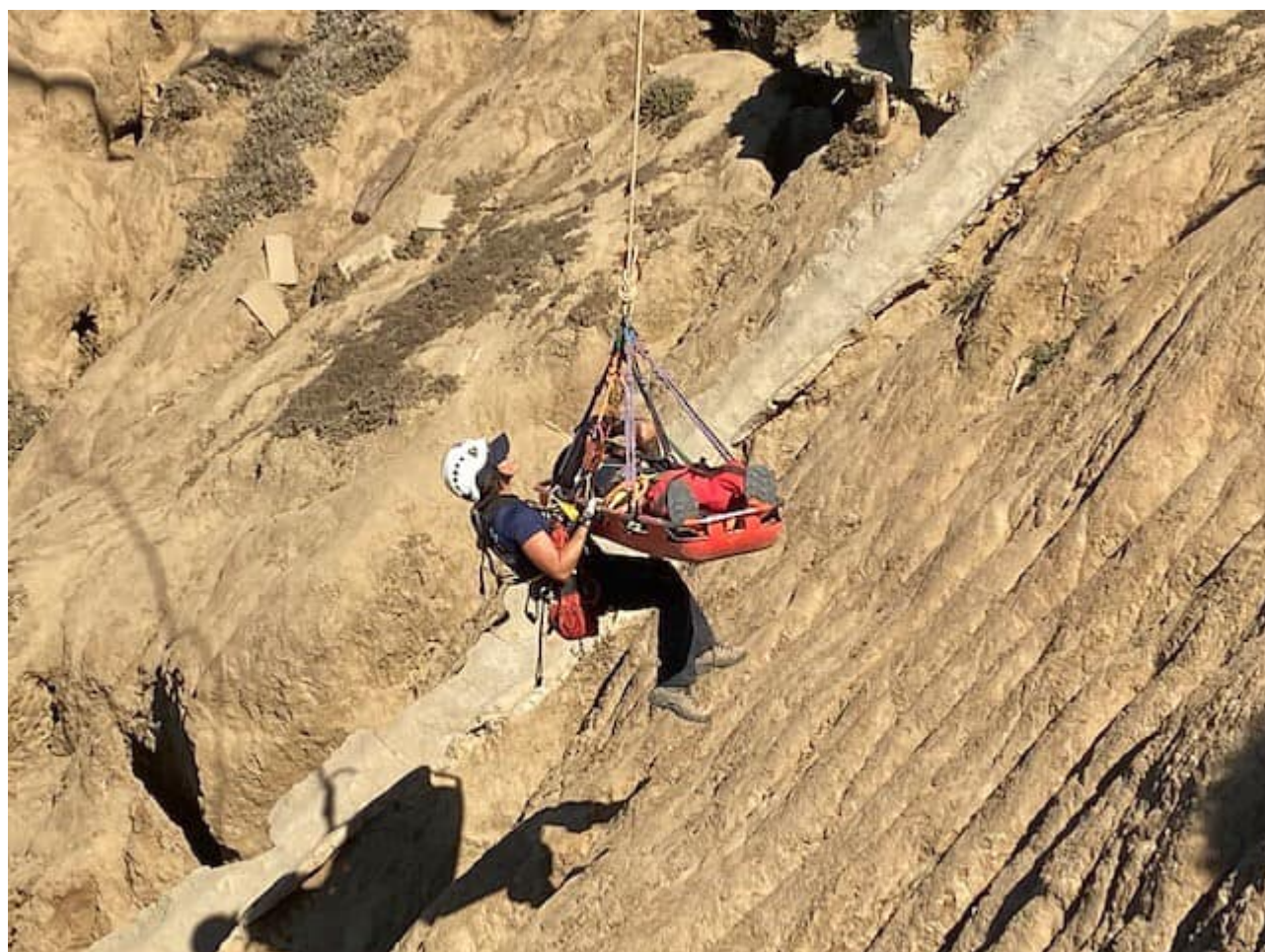


San Diego City Firefighters Responding to Cliff & Inland Water Rescues is Costly to Taxpayers & Creates Gaps in Service



February 2020

Key Findings

2008 - 2018 San Diego City Firefighters v. San Diego City Lifeguards Daylight Cliff and Inland Water Rescues

San Diego City Firefighters Unnecessarily Responding to Cliff & Inland Water Rescues:

- Wastes Taxpayers Resources
- Likely Creates Delays and Gaps in SDFD Service

31 Incidents Daylight Cliff Rescues – Fire vs. Lifeguard - Personnel

- SDFD Dispatched **604 Fire personnel** vs. **203 Lifeguard personnel**
- SDFD Averaged **19.5 Fire personnel** vs. **7 Lifeguard personnel**

31 Incidents Daylight Cliff Rescues – Fire vs. Lifeguard - Vehicles

- SDFD Dispatched **203 Fire vehicles** vs. **124 Lifeguard vehicles**
- SDFD Averaged **6.5 Fire vehicles** vs. **4 Lifeguard vehicles**

123 Incidents Inland Water Rescues - Fire vs. Lifeguard - Personnel

- SDFD Dispatched **1775 Fire personnel** vs. **596 Lifeguard personnel**
- SDFD Averaged **14 Fire personnel** vs. **6 Lifeguard personnel**

123 Incidents Inland Water Rescues - Fire vs. Lifeguard - Vehicles

- SDFD Dispatched **596 Fire vehicles** vs. **246 Lifeguard vehicles**
- SDFD Averaged **4.8 Fire vehicles** vs. **2 Lifeguard vehicles**

Table of Contents

<i>Key Findings</i>	2
<i>Graphs Illustrating Key Findings</i>	5
<i>Background</i>	8
<i>Exhibits</i>	13
<i>Authors</i>	26

Chart 1
2008 - 2018 Daylight Cliff & Inland Water Rescues

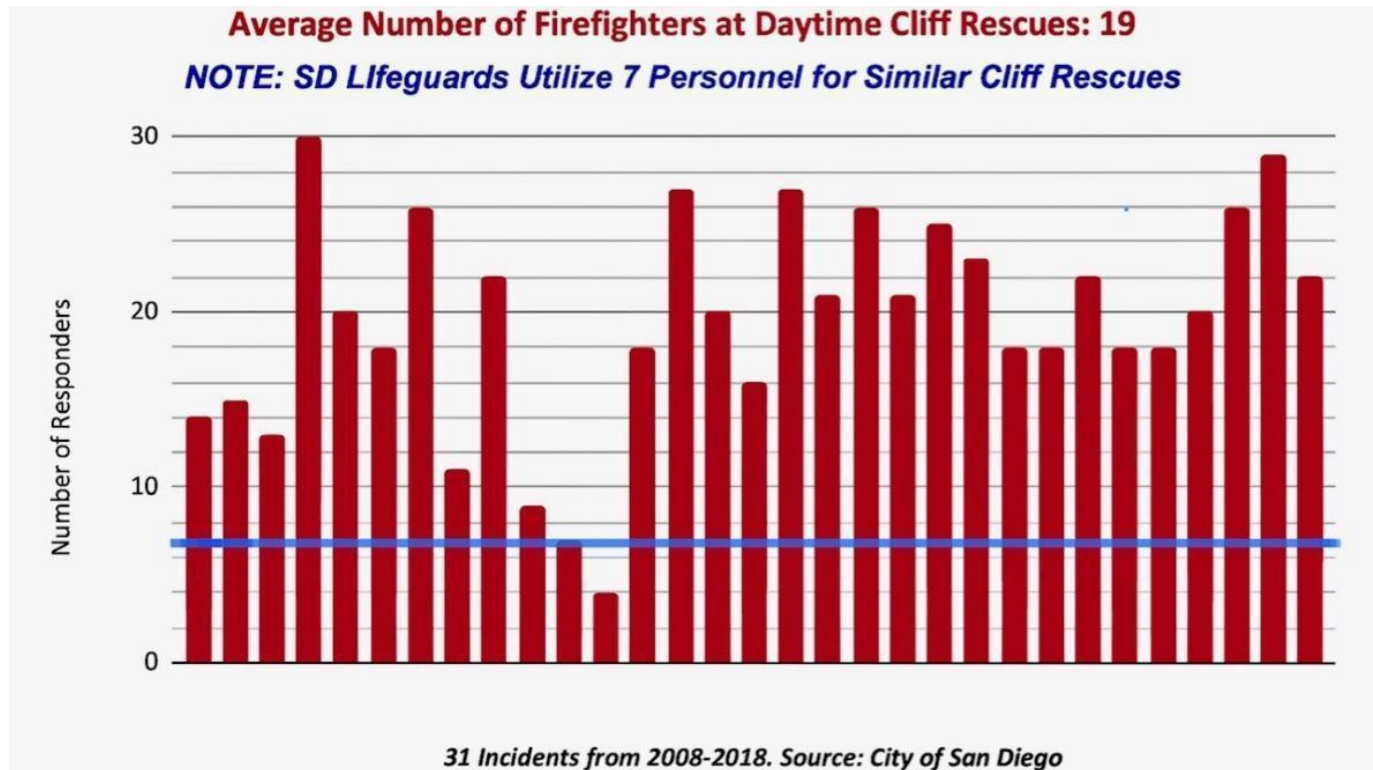
31 Daylight Cliff Rescues		Avg. # of Personnel	Avg. # of Vehicles
# SD Fire Personnel	604	19.5	
# SD Fire Vehicles	203		6.5
# Lifeguard Personnel*	217	7	
# Lifeguard Vehicles*	124		4
123 Inland Water Rescues		Avg. # of Personnel	Avg. # of Vehicles
# SD Fire Personnel	1775	14	
# SD Fire Engines	596		4.8
# Lifeguard Personnel*	738	6	
# Lifeguard Vehicles*	246		2

Note: Chart shows ONLY SDFD daylight cliff rescues, removing: night-time cliff rescues the responsibility of SDFD; "non beach" area cliff rescues; "joint" SDFD, Lifeguard rescues. 31 SDFD daylight cliff rescues remained. SDLG numbers are based on Standard Operating Procedures.

Source: City of San Diego

Graphs Illustrating Key Findings

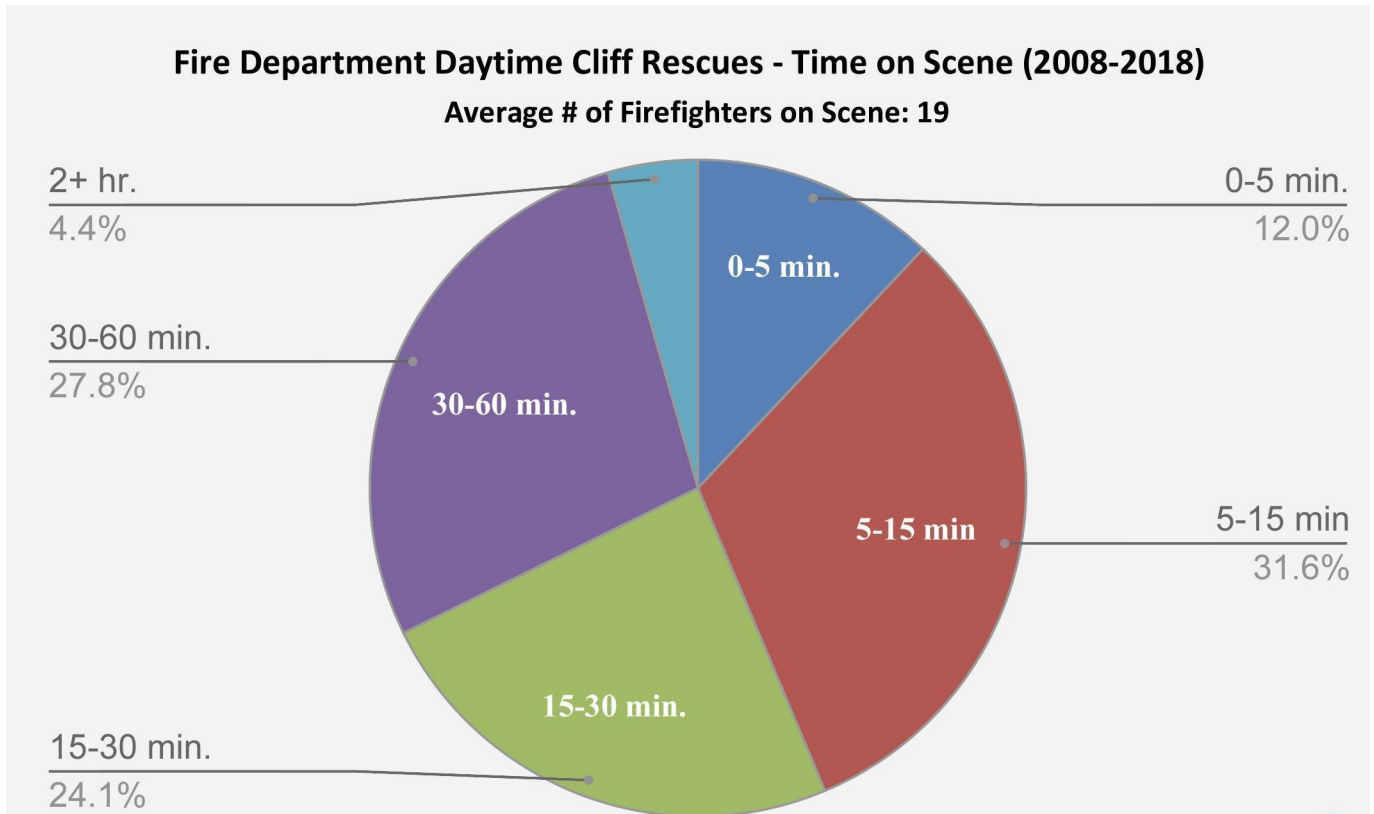
Graph 1



Using 19 firefighters to conduct daylight cliff rescues is unnecessary & costly

The San Diego Fire-Rescue Department aims to send an effective response force of at least 17 personnel to any cliff rescue when Lifeguards are not the primary responders. The department considers their ability to send an “effective response force” to an emergency as one of their key performance indicators in the Adopted FY 2020 Budget (Page 228, Key Performance Indicators). Although 17 Firefighters may successfully perform a cliff rescue, it’s hard to argue that this strategy is fiscally responsible, especially when you consider that Lifeguards typically perform these same rescues with only 7 Lifeguards.

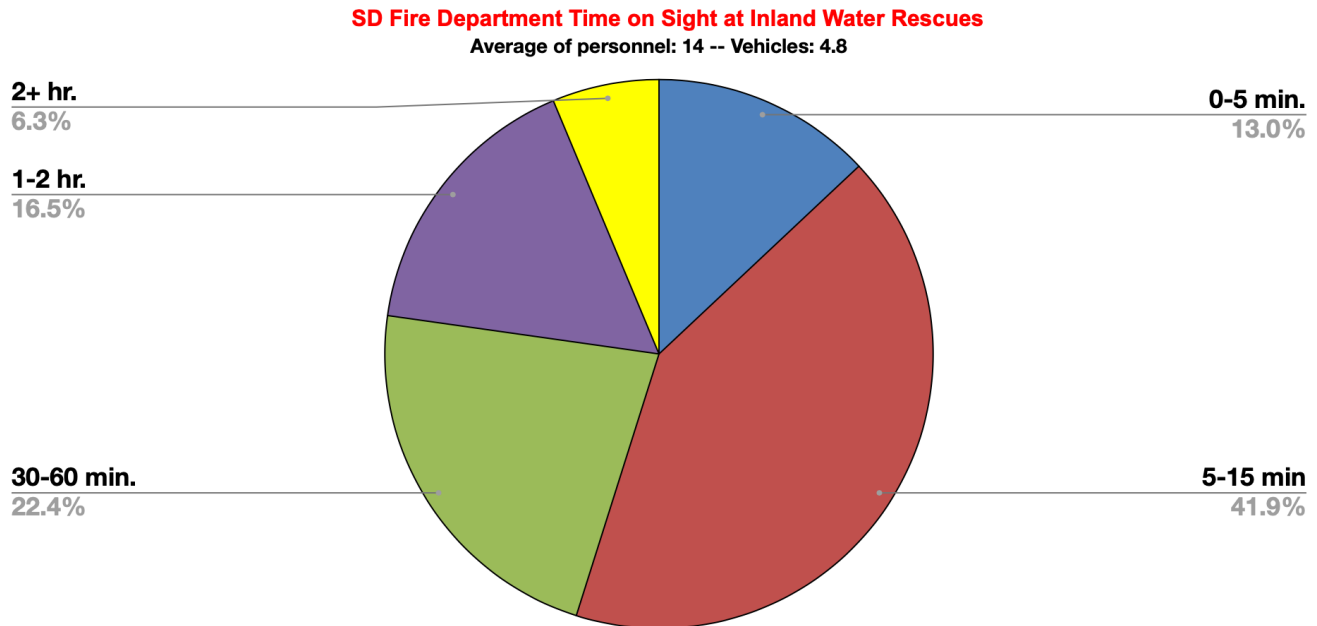
Graph 2



Responding to Daylight Cliff Rescues Results in San Diego City Firefighters being out of service for other emergency needs

Note: Responding to daylight cliff rescues puts SDFD resources out of service from 15 minutes to over two hours 56.7% of the time.

Graph 3



San Diego Firefighters complete inland water rescues within 15 minutes 54.9% of the time.

NOTE: The 2017 City Gate study conducted on behalf of the SD Fire-Rescue Department found that, "...Fire-Rescue is not meeting the City's goal of '5:00 minutes travel time.' The reality is, instead of a 5:00 minute response time from crew notification, the actual Citywide performance is 06:09 minutes (or 1:09) longer. Citygate submits there are three principal reasons for this situation: (1) too few stations; (2) traffic congestion; and (3) high workload rates on many key engine companies". Page 7, section 1.4 Executive Summary.

Surprisingly, City Gate did not recognize the fact that time delays are also likely caused by the SDFD responding to daylight cliff and inland water rescues when they are not needed.

The report goes on to say that: "To substantially reduce travel time, more fire stations are necessary." Page 15, Finding # 15

Background

The San Diego Fire-Rescue Department includes both Firefighters and Lifeguards. Lifeguard Services is a division within the Department.

The FY 2020 (7/1/19-6/30/20) Budget includes:

Fire: \$214.1 million with 925 employees

Lifeguards: \$24.4 million with 174 employees

Note: while this is the Full Time Equivalent for SDLG's, many of their guards are seasonal.

Current Responsibilities

Although the San Diego Fire-Rescue Department, which is overseen by the Fire Chief, houses both Firefighters and Lifeguards, they are each represented by their own bargaining units and negotiate separate agreements with the City. Current contractual agreements and operating procedures designate San Diego Lifeguards as the primary daytime coastal cliff rescuers and the primary inland water rescuers throughout the year. San Diego Firefighters are the primary coastal cliff rescuers when San Diego Lifeguards do not have enough staffing to perform these rescues (which is generally from sunset until 9am). When these rescues occur, it is common practice to notify Lifeguards so they can respond and provide on scene advice. San Diego Firefighters are also the primary responders to inland cliff rescues and respond to inland water rescues when needed. This has been the status quo for many decades.

At the request of the San Diego Lifeguard Association, San Diego Taxpayers Advocate (SDTA) has been reviewing current practices regarding cliff rescue and inland water rescue within the San Diego Fire-Rescue Department. Specifically, SDTA is looking to compare the cost to the taxpayer of sending Firefighters to perform these rescues as opposed to sending Lifeguards.

SDFD Proposing Sending Firefighters to All Daytime Beach Cliff Rescues

The San Diego Fire-Rescue Department is proposing sending firefighters to all daylight cliff rescues. There are serious budgetary, efficiency, and public safety implications of these potential changes in policies and procedures.

The goal of this study was to have an “apples to apples” comparison between Firefighters and Lifeguards when they perform cliff rescues and inland water rescues. SDTA focused on the number of personnel and vehicles used during these types of rescues, as well as the amount of time it took to complete them.

SDTA filed a letter under the California Public Records Act (CPRA). All available city cliff and inland (non-beach) rescue data from 2008 through 2018 and assorted other data. SDTA notes it received prompt and helpful responses to this request and subsequent inquiries from the City Clerk. SDTA received an excel sheet with approximately 8000 line items of Fire Department Dispatch data including:

- **Type of rescue (cliff, inland water)**
- **Location**
- **Type of Unit (Engine, ambulance helicopter, etc)**
- **# of personnel in each vehicle**
- **Time assigned and time cleared**

While the Fire Dispatch spreadsheets indicated when a SD Lifeguard vehicle was dispatched to a San Diego Fire Department call, it did NOT show the number of lifeguard personnel. However, based on the types of Lifeguard vehicles dispatched, city-approved policies and standard operating procedures were referenced to allow for reliable personnel estimates.

Lifeguard Dispatch data was only available on several hundred handwritten paper Lifeguard Dispatch reports. These reports only went back a few years and were often a challenge to decipher. For these reasons, they were not used in this study.

Therefore, SDTA relied on the electronic data, supplied by Fire Dispatch, which listed when a Lifeguard vehicle was on scene at either a cliff or inland water rescue. From this information, the number of Lifeguard Units and Personnel was inferred from either Policies or Standard Operating Procedures.

Daylight Cliff Rescues

In order to make this study a fair comparison between Lifeguards and Firefighters, SDTA excluded all nighttime cliff rescues, which only Firefighters perform. These rescues have unique challenges not experienced during the daytime. Therefore, SDTA compared daytime coastal cliff rescues when Firefighters are the primary rescuers to when Lifeguards are the primary responders. As mentioned earlier, Firefighters are the primary cliff rescuers during the daytime prior to 9am, which is when Lifeguards relieve them of their primary cliff rescuer role.

The City has defined hours (seasonable) when SD Lifeguard stations are open. SDTA included ALL SD Firefighters Daylight cliff rescue data from sunrise and until dusk.

This strongly illustrates that a difference of a few minutes results in SDFD responding with an average of 19.5 Fire personnel in 6.5 vehicles versus the SD Lifeguards responding with an average of 7 personnel in 4 vehicles.

SDTA also disregarded data indicating responses from other agencies (Poway, Chula Vista FD, etc.) that were on scene.

On scene Fire Department Public Information Officers (PIO) were retained in the counts. SD Lifeguards do not have PIO personnel.

SDTA also excluded SDPD officers in the vehicle and personnel counts. There were numerous occasions when they were dispatched. Evidence that SD Firefighters responding to cliff rescues on bluff top roads often necessitated the dispatch of Police for traffic control.

This additional traffic control cost is rarely required at Lifeguard-only rescues.

San Diego Lifeguards have Primary Cliff Rescue Responsibility

The 2/1/2012 City of San Diego Fire Operations Manual indicates that "...establishing a clear incident command structure will allow for a more efficient and effective rescue operation." It also states that San Diego Lifeguards "will continue to be primarily responsible for responding to coastal cliff emergencies."

(See San Diego Fire Operation Manual Excerpt below.)

Section I, p.2

Cliff Rescues.

1. The Lifeguard Division will continue to be primarily responsible for responding to coastal cliff emergencies when Lifeguard staffing provides for a Lifeguard Rescue Response as outlined in Coastal Cliff Rescue Procedures 2.19. If the call for emergency services involves an injury of a person whose injury status is unknown, the appropriate Fire Operations and Advance Life Support (ALS) personnel will be dispatched as per the Coastal Cliff Rescue Procedures 2.19. Fire Operations and ALS personnel will not be dispatched until requested by the Lifeguard Division. If the Lifeguard Division, when responding to a cliff incident, determines that additional equipment is required or that additional personnel are required to perform the rescue safely, they should request assistance from Fire- Rescue and ALS personnel. Incident command authority will be followed as described in Coastal Cliff Rescue Procedures 2.19.
2. When Lifeguard night crew staffing is not available, Fire Operations will continue to be primarily responsible for responding to coastal cliff rescue emergencies. However, when such a call is received the appropriate Lifeguards should be called to assist the Fire Operations as described in Coastal Cliff Procedures 2.19.

Note: The data demonstrates that in recent years, SD Firefighters have been dispatched to certain daytime coastal cliff rescues that were once handled by SD Lifeguards. For instance, EVERY daytime cliff rescue above Torrey Pines State Beach was handled by Fire personnel in recent years. Why this costly change occurred is not clear.

SDFD and SDLG Vehicles/Personnel Utilized in Daylight Cliff Rescues

A variety of SD Fire-Rescue Department vehicles are regularly dispatched to rescues. The number of personnel for each vehicle is listed below:

Rescue	4
Truck	4
Engine	4
Search and Rescue	4
Brush Rig	4
Battalion Chief	1
Helicopter	3
Ambulance	2
Public Information Officer	1

Note: it is standard SDFD practice for helicopter and ambulance to be automatically dispatched

Below are some of the typical Lifeguard vehicles, and personnel numbers for each, that are dispatched to rescues:

Patrol Vehicle	2
Other Vehicle	1
Rescue	2
River Rescue Unit	3
Ambulance	2
Helicopter	3

Note: SD Lifeguards only call in a helicopter, an ambulance or additional assets if it is determined to be needed

As shown in Graphs 1 and 2 above, SDFD responds with an average of 6 vehicles and 19 personnel to daylight cliff rescues in locations where SD Lifeguards are already on scene or nearby. 51.9% of the time, these resources are out of service for 15 minutes to an hour and an additional 4.4% over 2 hours. These emergency service “gaps” must be filled by other engine companies, potentially pulling them out of THEIR service area which creates further gaps in emergency services.

In addition to service gaps, unnecessarily sending engines and personnel has the following impacts:

- Adds to the wear and tear of vehicles
- Increases maintenance costs
- Burns fuel unnecessarily
- Accelerates replacement schedules

Lifeguards don’t experience “gaps in service” when on cliff rescues

Since daylight cliff rescues generally occur where lifeguards are already patrolling, they can respond quickly without leaving the beach area. On duty lifeguards are able to easily shift resources without creating gaps in service. Less than 5% of cliff rescues are 911 calls which could require Lifeguards to leave the beach. In those rare cases they call in additional resources as required.

Inland Water Rescues

The data received from the City showed hundreds of incidents of “inland water rescues” (for example, a flooded intersection with a stalled car) however this study only included incidents which clearly showed Lifeguards were dispatched.

These incidents involved a wide variety of rescues, such as, people stuck in flood control channels, swollen creeks and rivers, and flooded vehicles. The most common locations for these inland water rescues are listed below:

A. Water Rescue Areas

- 1. Mission Valley**
- 2. Tijuana River Valley**

B. Swiftwater Rescue Areas

- 1. Chollas Creek**
- 2. Southcrest Federal**
- 3. Southcrest Imperial**
- 4. Cervantes**
- 5. Paradise Canyon**

Lifeguard River Rescue Team Responsible

According to the 1/1/2014 City Standard Operating Procedures for Swiftwater/Water Rescue Procedures, Lifeguard River Rescue Team will be called to make these rescues.” **SOP 1-1-2014, Page 1**

Like daytime cliff rescues, Lifeguards are supposed to be the primary responder for these often hazardous rescues.

Overall, inland water rescues are rare occurrences that current Lifeguard staffing can sufficiently handle. During heavy rain events, specially trained Lifeguard Tactical Teams are strategically placed throughout the City near flood prone areas. During heavy rain events, fewer people visit the beach, so Lifeguards can still manage the beach effectively while a portion of Lifeguard staffing is inland. Therefore, rain related inland water rescues rarely create service gaps.

Only One Fire Engine Needed to Assist Lifeguards

Customarily one fire engine (and an ambulance) would be on scene to be utilized to tie off and belay ropes and to hose off Lifeguards after finishing rescues in what can be toxic waters. Similar to cliff rescues, Lifeguards call in other assets, like helicopters, only if deemed necessary.

Fire Department Encroachment on Inland River Rescues.

Data supplied by the City indicates that SD Firefighters are responding in force, with Fire assets and Fire personnel, without demonstrable need to assist SD Lifeguards.

Between 2008 and 2018, there were 123 incidents of inland water rescues that this study focuses on.

For those 123 incidents, Fire dispatched 596 Fire vehicles and 1775 Firefighters, which averages out to 4.8 vehicles and 14 Firefighters.

To those same 123 Incidents, Lifeguards dispatched 246 Lifeguard vehicles and 738 Lifeguards, which averages out to 2 vehicles and 6 Lifeguards.

SD Fire Department Response Causes Service Gaps

As shown in Graph 3 above, Fire Engines depart the scene of inland water rescues within 15 minutes roughly 55% of the time, which clearly demonstrates that Lifeguards did not need their assistance. These unnecessary responses create service gaps for other emergency needs.

In addition, sending engines when not needed:

- Adds to the wear and tear of vehicles
- Increases maintenance costs
- Burns fuel unnecessarily
- Accelerates replacement schedules

Exhibits

11/29/19 Lifeguard Inland Water Dispatch report. Note the short duration of SDFD resource.

SAN DIEGO LIFEGUARD SERVICE ► DISPATCH REPORT

Time 1657 Date 11/29/19 Dispatcher KERR / KLEMMANN

☐ Swimmer ☐ Boating ☐ Cliff ☐ Diving ☒ River ☐ Medical ☐ Enforcement ☐ Other

Call reported as: CAR IN WATER 3 VICTIMS

Location: FASHION VALLEY MALL CAMINO DEL RIO Cross St. CAMINO DE LA REINA

Description: (victim(s) # 3 suspect boat) VICTIMS TRAPPED IN SLOW MOVING WATER / UPDATED TO 6 VICTIMS AND "AGGRESSIVELY MOVING WATER"

R.P. (#1) 911 CALL VIA PD Call back # P.D.

R.P. location _____ 911 Call ☐ Callbox Call ☐ Regular Call ☒ VHF ☐

R.P. home address _____ SDPD ☒ SDFD ☒ SDLG ☒

WORKING CHANNEL 9H96

INCIDENT SUPERVISOR: _____; COMMAND, AT _____: _____ HRS.

DEPT.	UNIT(S)	TIME DISPATCHED	TIME RESPONDING	TIME AT SCENE	TIME CLEAR
SDLG	R-4	1700	17.02	1710	18.37
SDPD		1658	16.58	1702	
SDFD	E8	1702	17.02	17.10	17.24
	B-2	1702	17.02	17.10	17.29
	C-2	1704	17.06	WAIVED OFF	17.18
	T-45	1704	17.04	17.15	17.29
	USAR 2	1704	17.04	WAIVED OFF	17.29
	M-5	1704	17.04	N/A	17.29
					17.29

Comments: CALL CHANGE @ 1701 FROM WR 0 TO WR 3
BY FIRE
GREY TOYOTA SUV DROVE AROUND BARRICADES TO
ATTEMPT TO CROSS RIVER. VICTIMS NON INJURY
REMOVED 2X BY CREWS.
*CALL BACKS LARSEN / FIERO / MANLEY / ROGINS / JORDAN

DISPOSITION: 6 VICTIMS TOTAL RESCUED BY LIFEGUARDS
TOW BY 21 SDPD

(Continued on back #)

FLS-LG2 (Rev. 12/97)

2019/2020 Lifeguard Station Hours

NOTICE

January 1, 2019

Notice 01-2019

2019 MAIN LIFEGUARD STATION CLOSING TIMES

From Date	Sunset	Through Date	Sunset	Closing Time	Early Shift Start	Late Shift Start
Standard Time						
1/1/19	1653	1/11/19	1701	1700	0700	0700
1/12/19	1702	2/8/19	1727	1730	0730	0730
2/9/19	1728	3/9/19	1752	1800	0800	0800
Daylight Saving Time						
3/10/19	1852	3/22/19	1901	1900	0900	0900
3/23/19	1902	4/26/19	1926	1930	0900	0930
4/27/19	1927	5/24/19	1946	2000	0900	1000
5/25/19	1947	8/2/19	1946	2030	0900	1030
8/3/19	1945	9/2/19	1912	2000	0900	1000
9/3/19	1910	9/20/19	1848	1930	0900	0930
9/21/19	1846	10/4/19	1829	1900	0900	0900
10/5/19	1828	10/18/19	1812	1830	0830	0830
10/19/19	1811	11/2/19	1756	1800	0800	0800
Standard Time						
11/3/19	1656	12/31/19	1652	1700	0700	0700

- Early Vehicle (EV) shifts will begin 15 minutes before the Early Shift.
- Late Vehicle (LV) shifts will begin 15 minutes after the Late shift.

Rob Brown
Lifeguard Sergeant

Cliff Rescues Vehicles And Equipment

SDFD



Types of Engines dispatched to cliff and water rescues. Each have a crew of 4 firefighters.



Ladder Truck

Ambulance automatically dispatched to all SDFD Cliff and Inland Water Rescues. Called in “as needed” by Lifeguards.





SDFD Helicopter includes 3 personnel and is automatically dispatched to many SD Firefighter rescues. SD Lifeguards only request a helicopter response when it's necessary.



SDFD responding to March 4, 2019 Daylight Cliff Rescue in La Jolla. 14 personnel shown plus SDPD.

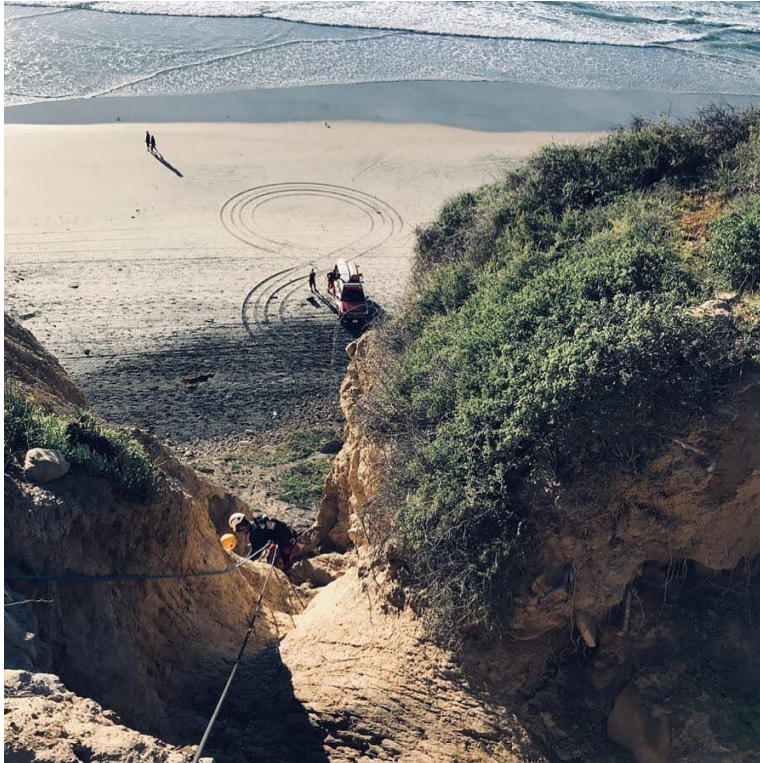


SDFD responding to March 4, 2019 Daylight Cliff Rescue in La Jolla prior to Lifeguards being “on duty” for cliff rescues. Had this incident occurred only an hour or two later, Lifeguards would have been the primary responders using 4 vehicles and 7 personnel. Neither Firefighters nor Police Officers would have been needed.

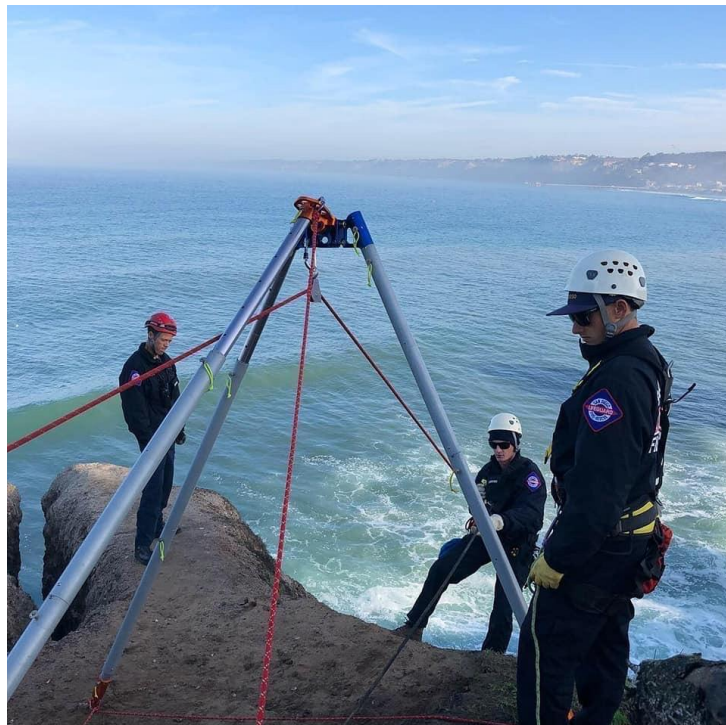
LIFEGUARDS



**Standard Lifeguard vehicle used for patrolling beaches and cliff Rescues.
Has a crew of 2 Lifeguards.**



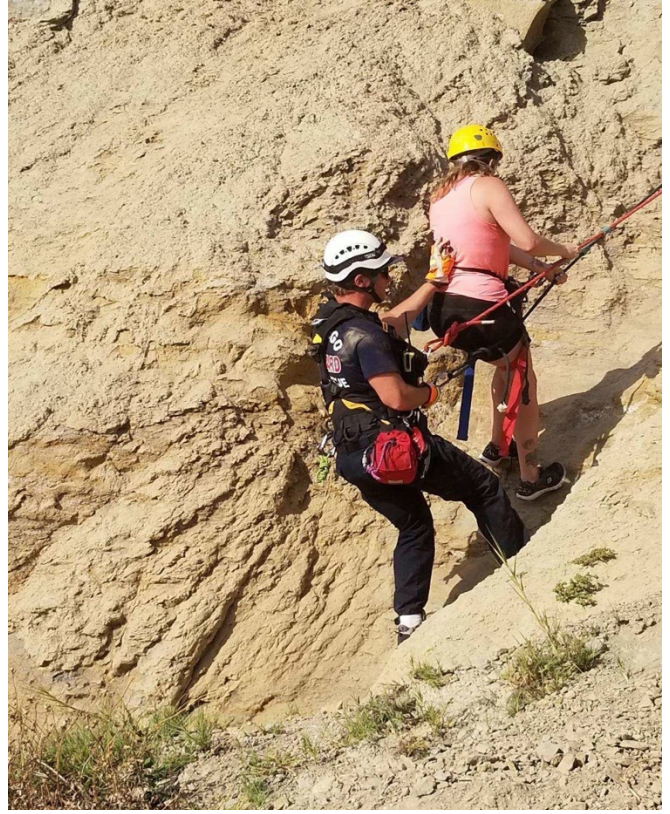
Lifeguard vehicle drive a “figure 8” on the beach to show rescuers atop cliff location of victim.



**The Arizona Vortex is an advanced piece of equipment that Lifeguards sometimes use during cliff rescues. It allows for a rescuer and victim to easily and safely return to the top of a cliff.
Lifeguard shown repelling with equipment to rescue victim.**



Lifeguards rescue trapped hiker from above cliffs.



Lifeguard assisting victim up cliff after rescue.



Helicopter called in to lift victim to safety. Lifeguards call in helicopters only when it is determined one is needed.



Lifeguard Rescue 44, which has a retractable boom, is a specialized truck for cliff and inland water rescues.



**Lifeguard Rescue 44 assisting in beach cliff rescue.
Ambulance also on scene.**

I. Dispatching Incidents

A. Definitions:

Water Rescue 1	A report of persons or occupied vehicles trapped by non-moving water less than three feet deep. An example would be a vehicle in a flooded intersection after a heavy down pour.
Water Rescue 2	A report of a water emergency in deep, non-moving water. An example would be a call of a capsized vessel in a lake.
Water Rescue 3	A report of persons trapped by moving water. An example would be a vehicle that becomes stranded trying to drive through a flowing creek-bed.
Water Rescue 4	A report of someone who is free floating in moving water. An example would be that person falls into a river or culvert and is floating down stream.

B. Response Assignments:

(all Water Rescues will include Lifeguard River Rescue Team)

Water Rescue 1	1 Engine or Truck
Water Rescue 2	1 Engine, 1 Truck, 1 Rescue, 1 ALS, 1 Helicopter, 1 Battalion Chief and SCNOT
Water Rescue 3	1 Engine, 1 Truck, 1 Rescue, 1 ALS, 1 Helicopter, 1 Battalion Chief and SCNOT
Water Rescue 4	1 Engine, 1 Truck, 1 Rescue, 1 ALS, 1 Helicopter, 1 Battalion Chief and SCNOT
Flood Control Channels	I. Swiftwater Rescue 1 to point of entry 1 Engine and 1 Truck II. Swiftwater Rescue 2 to midpoint 1 Engine, 1 Truck, 1 ALS, 1 Battalion Chief, Lifeguard SWRT iii. Swiftwater Rescue 3 to furthest point 1 Engine, 1 Truck, 1 Rescue, 1 Battalion Chief

Inland Water Rescues Vehicles and Equipment

As discussed and shown in Graph 3 above, the SD Fire Department sends an average of 4.8 vehicles to inland water rescues while the SD Lifeguards send an average of 2.



Same vehicles used for beach patrol and cliff rescues are placed in flood prone locations around the city in preparation for inland water rescues. Raft and other special equipment on top and inside.



SD Lifeguard heading to rescue a driver who drove into a flooded road. 12/2019



Lifeguards rescuing and locating people trapped in cars.



Lifeguards rescue swift water victim as firefighters assist with ropes. SDPD on scene.



Inland water rescues often involve fast flowing debris and contaminated water, as shown in this December 2019 rescue.



Firefighter hoses down Lifeguard and equipment with potential contaminants after completing an inland water rescue.

AUTHORS

Scott Barnett is President of San Diego Taxpayers Advocate. He started in local government and politics with his election to the Del Mar City Council at age 21 in 1984 where he also served as the City's representative on the North County Transit and San Diego Association of Governments boards. Since then he has been involved in hundreds of public policy issues first as Executive Director of the San Diego County Taxpayers Association where he instituted the iconic Golden Fleece and Watchdog Awards.

Scott founded Taxpayers Advocate in 2003, has run dozens of local political campaigns, and was an elected Trustee (2010-2014) on San Diego Unified School Board where he lead efforts to implement innovative public-private partnerships which resulted in privately built public facilities, freed up budget dollars and generated new funds for student learning.

He served as a policy analyst and press secretary to California State Legislators and was appointed by Democratic Assembly Speaker Toni Atkins to the prestigious State of California Little Hoover Commission, a bi-partisan board including state legislators which reviews state programs and spending.

He is recognized as a skilled advocate and an expert in media relations and has appeared dozens of times on local, state and national media.

He has lectured in local government at UCSD, SDSU and National University.

Richard A. Parker, Ph.D. is President of Rea & Parker Research and is Professor Emeritus in the School of Public Affairs at San Diego State University where he continues to teach graduate courses in statistics, survey research, urban economic development, and finance. He possesses extensive analytical experience in statistical survey research, market analysis, land use, real estate development and valuation, and transportation issues.

Parker is a graduate of Brown University and the University of California at Berkeley. He earned degrees in Business Administration from those institutions (Bachelor of Science and Master of Business Administration (MBA)). He also possesses a graduate degree in City Planning (Master of City Planning) from San Diego State University and a Ph.D. in Business from UCLA and Pacific Western University.

Parker specializes in fiscal impact studies, urban development, economic impact modeling, job generation and socioeconomic and demographic analyses. He has consulted in these fields for many public utilities, transportation agencies, general governmental agencies and legislative bodies, private development--residential, retail, hospitality, American Indian economic development, and public/affordable housing development and finance, among many others.

He has published a variety of articles, monographs, and books on these subjects and received the Bernays Mark of Merit for Special Purpose Publications and was named as one of the top 50 graduates ever to have earned a degree from the School of Public Affairs at San Diego State. He has participated in various panel discussions, delivered expert testimony to legislatures and to courts of law, and has appeared on several radio and television programs.

Christopher Valasco, Project Intern, SDSU Masters in Government student for his invaluable contribution to this report