

# PUBLIC SAFETY DRONES: AN UPDATE

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In this update to the Center for the Study of the Drone's database of public safety agencies with drones, we estimate that at least 910 state and local police, sheriff, fire, and emergency services agencies in the U.S. have acquired drones. In this revised count, we uncovered more agencies that had acquired drones prior to 2017 than previously reported, and we estimate that the number of public safety agencies with drones has increased by approximately 82 percent in the last year alone. All told, there are now more than twice as many agencies that own drones as there are agencies that own manned aircraft in the U.S.

This database includes all known law enforcement and emergency response agencies that are reported to own at least one drone. It may not, however, reflect the total number of agencies that have used drones at some point, as it is not uncommon for an agency to receive drone services from nearby agencies or to contract the services of a local drone operator. This database is based on a combination of local media reports and government records.

## METHODOLOGY

This survey is based on local media reports as well as official records such as FAA aircraft registrations, FAA Part 107 Waivers, and local government minutes and publications. Thirty-four agencies were contacted by the author to confirm their acquisition of a drone. In addition to local law enforcement and first responder agencies, this dataset includes city and county emergency services agencies that have acquired drones, as well as statewide offices such as highway patrol and fire marshals. In compiling this database, we did not include agencies that were reported to have borrowed a drone or contracted drone services from a third-party. We did include agencies that have purchased drones for training purposes and we have included public sector agencies that, while not entirely dedicated to public safety, have expressed an their intention to use those drones for public safety missions such as search and rescue. As

## KEY TAKEAWAYS

- At least 910 state and local police, sheriff, fire and EMS, and public safety agencies have acquired drones in recent years;
- Law enforcement agencies make up two-thirds (599) of the public safety agencies with drones;
- The majority of drones operated by public safety agencies are consumer and prosumer models;
- There are more than twice as many public safety agencies with drones as there are agencies with manned aircraft.

this is an informal survey based on a variety of source materials, it should be viewed as an estimate and not as an official tally of public safety drone programs.

An additional source of material for this update was a list of civil and public agencies that have received Certificates of Authorization (COA) to fly drones. Certificates of Authorization and Part 107 Waivers are two types of additional approval that some drone operators may choose to pursue depending on the location or type of planned operation. (Not all public safety agencies are required to obtain either approval to begin flying.) This data was released by the Federal Aviation Administration in October 2017 in response to a Freedom of Information Act [request by Muckrock](#). Each of the 94 new agencies in the dataset that were added based on having received a COA have been verified by a secondary source. *For more on the methodology, please see our [April 2017 study](#).*

*Edited by Arthur Holland Michel. Editorial support provided by Elizabeth Fitzgerald. Presentation by Dan Gettinger. Copyright © 2018 Center for the Study of the Drone at Bard College*

## FINDINGS

### Agency Type

Of the 910 public safety agencies in our dataset, 302 are sheriff or county police (33 percent), 278 are municipal police (30 percent), 186 are municipal and county fire or EMS (20 percent), 107 are municipal and county emergency management and public safety agencies (12 percent), and 37 are statewide public safety agencies such as highway patrol and fire marshal (4 percent). Some city, county, and state public safety agencies have acquired drones for use by multiple different agencies. This proportion of agencies according to type has not changed significantly since the Center’s April 2017 report.

### Location

Public safety agencies that have acquired drones are located in 619 counties in every U.S. state except for Rhode Island. Texas (67), California (58), and Wisconsin (56) lead the states in terms of the number of agencies with drones. Twenty-eight states have at least one statewide public safety agency with drones, up from 17 states in our previous estimate. Of the 619 counties with a municipal or county public safety department drone, 152 are home to two or more public safety agencies with drones. The county with the greatest number of public safety agencies with drones is Cook County, Illinois, which has 11 agencies with drones.

### Date of Acquisition\*

We have established the approximate year that a public safety department started its drone program for 860 of 910 agencies. Between 2009 and 2015, at least 148 agencies appeared to have started a drone program. In 2016, 258 agencies appeared to have started a drone program—more than all the prior years combined—and in 2017, 334 agencies. In 2017, the total number of agencies with drones increased by 82 percent. As of this writing, 120 agencies appear to have acquired drones in 2018.

*\*This estimate is based on either the year as reported in local media or, in the case of FAA records, the year that the department received an N-number registration, COA, or Part 107 Waiver. As a result, it is difficult to know the precise origin date for each department’s drone program.*

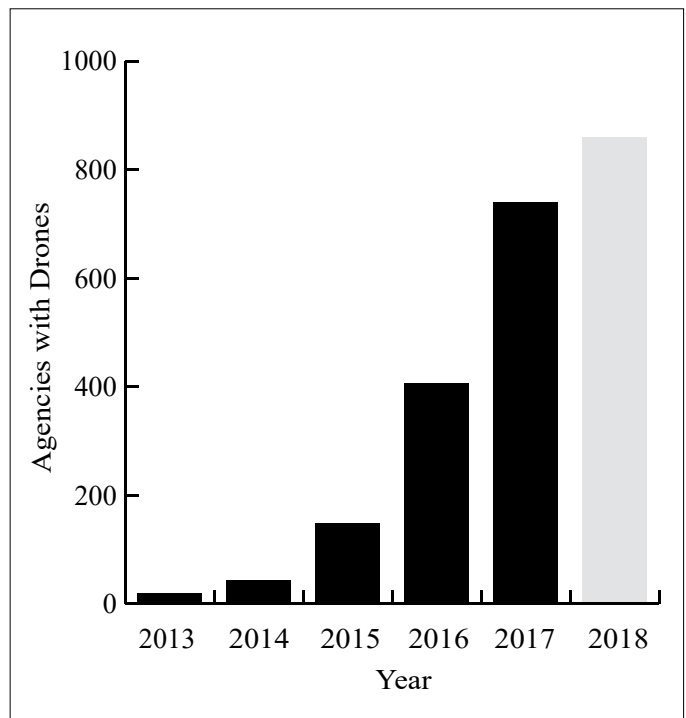


*The Tulare County Sheriff’s UAV Response Unit. Photo courtesy of the Tulare County Sheriff.*

### Public Safety Agencies with Drones

Agency Type	Qty
County Police and Sheriff	302
Municipal Police	278
Fire and EMS	186
City/County Emergency Management	107
Statewide Agency	37

### Public Safety Agencies with Drones by Year\*



*\*Data is available for 860 of the 910 agencies.*

## Drone Type

We have determined the drone manufacturer and model for 627 of the 910 agencies in the database. Of these 627 agencies, the majority (523) have acquired at least one drone from DJI, the Chinese manufacturer of consumer and prosumer drones. Of the 627 agencies, 260 (41 percent) have acquired one or more DJI Phantom\* and 211 agencies (33 percent) have acquired one or more DJI Inspire. At least 103 agencies (16 percent) have acquired either a DJI Matrice or DJI Mavic. At least 31 agencies own a drone made by Yuneec, making that company the second most popular drone manufacturer following DJI. There are 28 companies and 42 drone models contained in the database.

*\*Numbered variants of the same model are classified as the same system; drones such as the DJI Phantom 3 and Phantom 4 are listed only as “DJI Phantom.”*

### Number of Drones per Agency

Approximately 21 percent of agencies (194) appear to have acquired more than one drone, although the true number of agencies with multiple drones is likely higher. These agencies have on average three drones per department. Three statewide agencies—the New York State Police, Texas Department of Public Safety, and Louisiana Fire Marshal’s Office—have acquired more than 10 drones. The local law enforcement agencies with the greatest number of drones are the Polk County Sheriff, FL (20 drones); San Diego County Sheriff, CA (10); Alameda County Sheriff, CA (10); Palm Beach County Sheriff, FL (9); and Rockford Police Department, IL (9).

### Acquisition Method and Cost

Public safety agencies acquire drones in different ways. Of the 161 agencies for which this information is available, 74 have acquired a drone with a donation, 39 with grants, 26 with seized or forfeited funds, 17 with budgeted funding, and 5 by other means. The average cost of acquiring one or more drones was \$18,117 while the median was \$10,000. (Cost data is available for 172 of 910 agencies. It does not necessarily reflect budgeted expenditures and may include additional costs such as sensors and training.) As of March 2018, we have not observed any transfers of unmanned aircraft from the U.S. military to local law enforcement through the Defense Logistics Agency’s 1033 program.

## Common Public Safety Drone Manufacturers\*

Mfr	Agencies
DJI	523
Yuneec	31
Physical Sciences	14
Draganfly	10
Parrot	8
Leptron	8

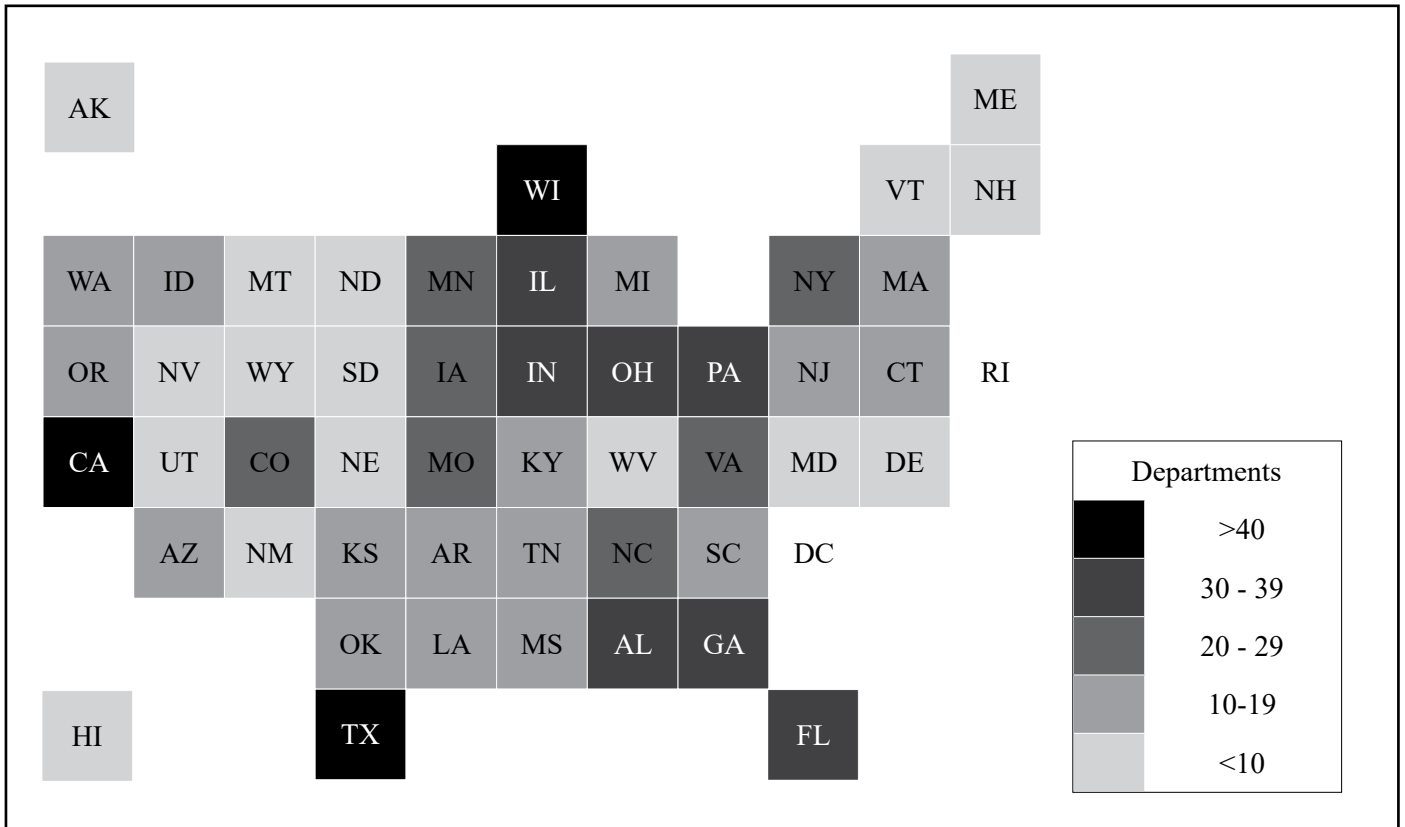
## Common Public Safety Drones\*

Mfr	Mdl	Agencies**
DJI	Phantom	260
DJI	Inspire	211
DJI	Matrice	61
DJI	Mavic	42
Yuneec	Typhoon	30
Physical Sciences	InstantEye	14
Draganfly	Draganflyer	10
3DR	Solo	9
Leptron	RDASS	8
Aeryon	Skyranger	6
Parrot	AR Drone	5
Lockheed Martin	Indago	5
Autel	X-Star Premium	5
Maxsur	Seeker	4
GoPro	Karma	3

*\*Data is available for 627 of 910 agencies. Some agencies have more than one type of drone.*

*\*\*Reflects the number of agencies with at least one drone of each model. Does not reflect the total number of units in service.*

## Map of Public Safety Agencies with Drones by State



## List of Public Safety Agencies with Drones by State

ALABAMA	31	LOUISIANA	17	OHIO	38
ALASKA	2	MAINE	3	OKLAHOMA	14
ARIZONA	16	MARYLAND	6	OREGON	18
ARKANSAS	10	MASSACHUSETTS	18	PENNSYLVANIA	31
CALIFORNIA	58	MICHIGAN	14	SOUTH CAROLINA	17
COLORADO	27	MINNESOTA	29	SOUTH DAKOTA	6
CONNECTICUT	18	MISSISSIPPI	10	TENNESSEE	19
DELAWARE	8	MISSOURI	22	TEXAS	67
FLORIDA	38	MONTANA	2	UTAH	9
GEORGIA	34	NEBRASKA	6	VERMONT	1
HAWAII	1	NEVADA	8	VIRGINIA	26
IDAHO	12	NEW HAMPSHIRE	4	WASHINGTON	14
ILLINOIS	39	NEW JERSEY	13	WEST VIRGINIA	3
INDIANA	35	NEW MEXICO	2	WISCONSIN	56
IOWA	24	NEW YORK	28	WYOMING	2
KANSAS	17	NORTH CAROLINA	20		
KENTUCKY	11	NORTH DAKOTA	6		

## COMPARISON TO MANNED PUBLIC SAFETY AIRCRAFT\*

The majority of agencies that operate drones did not previously possess their own aerial capability. Of the 910 public safety agencies with drones, 80 also fly a manned aircraft. (Of course, public safety manned aircraft are probably more frequently used to support multiple agencies in a given area than drones.) One-hundred and twenty-five counties contain at least one public safety agency with a manned aircraft and one agency with a drone.

Municipal and county law enforcement jurisdictions with manned aircraft tend to be significantly larger in terms of the number of personnel than jurisdictions with drones. According to the Department of Justice's [Uniform Crime Reporting](#) law enforcement employee data, the municipalities with at least one law enforcement drone employ on average 272 law enforcement officer and civilian personnel. Meanwhile, municipalities with at least one manned aircraft employ, on average, 2,409 law enforcement personnel. County-level law enforcement agencies with drones employ an average of 343 officer and civilian personnel, while county-level law enforcement agencies with manned aircraft employ an average of 774 personnel.

Public safety departments with drones and departments with manned aircraft tend to look pretty different from one another in other ways:

- Public safety departments with drones are more widely distributed across the U.S. than departments with manned aircraft. For example, while just 16 percent of all departments with manned aircraft are located in the northeast and midwest (Census Regions 1 and 2), approximately 45 percent public safety

## Public Safety Aviation Summary

Agencies with	Qty
Drones	910
Aircraft	338
Both Drones and Aircraft	80

- departments with drones are located in these regions.
- The average population of all counties with manned aircraft owned by public safety departments is 94 percent greater than the average population of all counties with department-owned drones.
- Compared to drone-operating agencies, of which two-thirds are explicitly law enforcement departments, 90 percent of public safety departments that operate manned aircraft (309 out of 338) work in law enforcement.
- Fewer than five municipal or county emergency management agencies fly manned aircraft, whereas 107 municipal or county emergency management agencies own drones. Similarly, while just 18 fire departments own manned aircraft, there are at least 186 fire departments with drones.

*\*The manned public safety aircraft data was sourced from the [FAA's Aircraft Registry](#). The law enforcement personnel data was sourced from the Department of Justice police employee data from 2016, the most recent year for which data is available. The DoJ's UCR data does not include all law enforcement departments, nor does it reflect fire or EMS personnel. UCR law enforcement employee data was available for approximately 80 percent of municipalities and counties with drones or manned aircraft. County population data was sourced from the 2010 U.S. Census. For more on manned public safety aviation, see page 14.*

## Municipal and County Law Enforcement Agencies with Drones and Manned Aircraft by Size

Agency Size	Municipal		County	
	Agencies with Drones	Agencies with Aircraft	Agencies with Drones	Agencies with Aircraft
More than 5,000 Employees	1	5	1	2
1,000 - 5,000	9	30	11	17
500 - 1,000	12	10	19	19
100 - 500	96	22	101	44
Fewer than 100 Employees	122	3	108	25

## APPENDIX 1: PUBLIC SAFETY DEPARTMENTS WITH DRONES

For the full database, please visit [dronecenter.bard.edu](http://dronecenter.bard.edu).

Anchorage Police Department	AK	Rogers Police Department	AR	Fremont Fire Department	CA
Fairbanks Police Department	AK	Sherwood Police Department	AR	Fremont Police Department	CA
Autauga County Emergency Management Agency	AL	Union County Sheriff	AR	Kern County Sheriff	CA
Birmingham	AL	West Memphis Fire Department	AR	Lodi Police Department	CA
Blount County	AL	Arizona Department of Corrections	AZ	Los Angeles County Sheriff	CA
Clanton Police Department	AL	Arizona Department of Public Safety	AZ	Los Angeles Fire Department	CA
Coffee County Sheriff	AL	Chandler Police Department	AZ	Los Angeles Police Department	CA
Cullman Police Department	AL	Cochise County Sheriff	AZ	Los Banos Police Department	CA
Dale County Sheriff	AL	Gila River Police Department	AZ	Menlo Park Fire Department	CA
Dallas County Sheriff	AL	Maricopa County Sheriff	AZ	Merced County Sheriff	CA
Etowah County Sheriff	AL	Maricopa Police Department	AZ	Merced Police Department	CA
Gadsden Police Department	AL	Mesa Fire and Medical	AZ	Modesto Police Department	CA
Henry County Sheriff	AL	Navajo County Sheriff	AZ	Moraga-Orinda Fire District	CA
Hoover Police Department	AL	Oro Valley Police Department	AZ	Newark Police Department	CA
Houston County Sheriff	AL	Paradise Valley Police Department	AZ	Oakdale Police Department	CA
Jasper Fire Department	AL	Phoenix Fire Department	AZ	Pomona Police Department	CA
Jefferson County Sheriff	AL	Sahuarita Police Department	AZ	Rancho Cucamonga Fire Protection District	CA
Lauderdale County Sheriff	AL	Salt River Police Department	AZ	Redding Police Department	CA
Lee County Sheriff	AL	Scottsdale Police Department	AZ	Redwood City Fire Department	CA
Limestone County Sheriff	AL	Sedona Fire Department	AZ	Rialto Fire Department	CA
Mobile County Sheriff	AL	Alameda County Sheriff's Office	CA	Richmond Police Department	CA
Mobile Police Department	AL	Anaheim Fire and Rescue	CA	Ripon Consolidated Fire District	CA
Montgomery County Sheriff	AL	Anderson Police Department	CA	Ripon Police Department	CA
Pelham Police Department	AL	Azusa Police Department	CA	Riverside County Sheriff	CA
Priceville Police Department	AL	Bakersfield Fire Department	CA	San Bernardino County Fire Protection District	CA
Rainbow City Police Department	AL	Barstow Police Department	CA	San Bernardino Police Department	CA
Russell County Sheriff	AL	Beaumont Police Department	CA	San Diego County Sheriff's Department	CA
Russellville Police Department	AL	Cal State Monterey University Police Department	CA	San Jose Police Department	CA
Selma Police Department	AL	Calaveras County Sheriff	CA	Seaside Fire Department	CA
Shelby County Sheriff	AL	Chino Police Department	CA	Sonoma County Sheriff	CA
Talladega County Sheriff	AL	Chula Vista Police Department	CA	Stanislaus County Sheriff	CA
University of Alabama in Huntsville Police Department	AL	Contra Costa County Sheriff	CA	Stockton Police Department	CA
Vestavia Hills Fire Department	AL	Cosumnes Fire Department	CA	Torrance Police Department	CA
Benton Police Department	AR	Culver City Police Department	CA	Tulare County Sheriff	CA
Jackson County Sheriff	AR	El Dorado County District Attorney	CA	Tulare Fire Department	CA
North Little Rock Police Department	AR	El Dorado County Sheriff	CA	Tuolumne County Sheriff	CA
Ouachita County Sheriff	AR	Escalon Police Department	CA	Upland Police Department	CA
Polk County Emergency Management Office	AR	Fontana Police Department	CA	Vacaville Police Department	CA
Pulaski County Sheriff	AR			Ventura County Sheriff	CA

West Covina Police Department	CA	Stamford Police Department	CT	Palm Beach Gardens Fire Department	FL
Boulder Fire Department (Emergency Squad)	CO	Trumbull Police Department	CT	Palm Beach Gardens Police Department	FL
Boulder Police Department	CO	Vernon Department of Emergency Management	CT	Polk County Sheriff	FL
Colorado Springs Fire Department	CO	West Haven Fire Department	CT	Putnam County Sheriff	FL
Colorado State Fire Prevention and Control	CO	Weston Volunteer Fire Department	CT	Riviera Beach Police Department	FL
Colorado State University Police Department	CO	Westport Police Department	CT	Sarasota County Fire Department	FL
Commerce City Police Department	CO	Woodbury Police Department	CT	Southern Manatee Fire and Rescue	FL
Douglas County Sheriff	CO	Delaware Department of Correction	DE	St. Petersburg Police Department	FL
El Paso County Search and Rescue	CO	Delaware Emergency Management Agency	DE	Tampa Bay Fire Department	FL
Elbert County Sheriff	CO	Delaware State Fire School	DE	Tampa Bay Police Department	FL
Fort Collins Police Services	CO	Dover Police Department	DE	Volusia County Sheriff	FL
Fountain Police Department	CO	Millville Fire Department	DE	West Palm Beach Police Department	FL
Golden Police Department	CO	New Castle County Police Department	DE	Athens-Clarke County Police Department	GA
Grand County Sheriff	CO	Ocean View Police Department	DE	Austell Police Department	GA
Greeley Police Department	CO	Wilmington Police Department	DE	Brunswick Police Department	GA
La Plata County Emergency Management	CO	Alachua County Fire Rescue	FL	Cherokee County Sheriff	GA
Larimer County Sheriff	CO	Aventura Police Department	FL	Clayton County Fire and Emergency Service	GA
Littleton Fire and Rescue	CO	Broward County Sheriff	FL	Cobb County Police Department	GA
Longmont Fire Department	CO	Clearwater Police Department	FL	Columbia County Sheriff	GA
Longmont Police Department	CO	Collier County Sheriff	FL	Conyers Police Department	GA
Loveland Fire Rescue Authority	CO	Coral Springs Fire Department	FL	Douglas County Sheriff	GA
Loveland Police Department	CO	Crestview Police Department	FL	Douglasville Police Department	GA
Mesa County Sheriff	CO	Davie Fire Rescue Department	FL	Duluth Police Department	GA
Mineral County	CO	Daytona Beach Police Department	FL	Dunwoody Police Department	GA
Poudre Fire Authority	CO	Daytona Beach Shores Police Department	FL	Gainesville Fire Department	GA
Pueblo Police Department	CO	Doral Police Department	FL	Georgia Department of Public Safety	GA
Red, White and Blue Fire Protection District	CO	Estero Fire Rescue	FL	Georgia Emergency Management Agency and Office of Homeland Security	GA
South Metro Fire Rescue Authority	CO	Florida Highway Patrol	FL	Georgia Public Safety Training Center	GA
Colchester Fire Department	CT	Hardee County Sheriff	FL	Glynn County Emergency Management Agency	GA
Danbury Fire Department	CT	Highlands County Sheriff	FL	Gwinnett County Police Department	GA
Fairfield County Hazardous Incident Response Team	CT	Key West City	FL	Habersham County Sheriff	GA
Hartford Police Department	CT	Lake County Sheriff	FL	Henry County Police Department	GA
Milford Police Department	CT	Lakeland Police Department	FL	LaGrange Police Department	GA
Norfolk Volunteer Fire Department	CT	Madeira Beach Fire Department	FL	Lamar County Sheriff	GA
North Stonington Volunteer Fire District	CT	Martin County Fire Rescue	FL	Lawrenceville Police Department	GA
Orange Fire Department	CT	Miami Beach Police Department	FL	Macon-Bibb County Emergency Management Agency	GA
Orange Police Department	CT	Miami Dade Schools Police Department	FL	Morrow Police Department	GA
Plainfield Police Department	CT	Orange County Fire and Rescue	FL	Newton County Sheriff	GA
South Windsor Police Department	CT	Orange County Sheriff	FL	Oconee County Sheriff	GA
		Orlando Fire Department	FL		
		Palm Beach County Sheriff	FL		



Pelham Police Department	GA	Power County Sheriff	ID	Bargersville Police Department	IN
Richmond Hill Police Department	GA	St. Anthony Police Department	ID	City of Crown Point (Public Safety)	IN
Roswell Police Department	GA	Twin Falls County Sheriff	ID	Clinton County Sheriff	IN
Sandy Springs Police Department	GA	Adams County Emergency Management Agency	IL	Elkhart Police Department	IN
Spalding County Sheriff	GA	Alsip Fire Department	IL	Fishers Police Department	IN
Thomas County Sheriff	GA	Belleville Fire Department	IL	Fort Wayne Police Department	IN
Whitfield County Sheriff	GA	Carpentersville Fire Department	IL	Franklin Police Department	IN
Maui Police Department	HI	Champaign Fire Department	IL	Gary Police Department	IN
Allamakee County Sheriff	IA	City of Peru	IL	Greenfield Police Department	IN
Black Hawk County UAS Aerial Response Team	IA	Columbia Fire Department	IL	Hammond Police Department	IN
Boone County Sheriff Department	IA	Country Club Hills Police Department	IL	Henry County Office of Emergency Management	IN
Buena Vista County Sheriff	IA	DuPage County Sheriff	IL	Indiana Department of Natural Resources Law Enforcement Division	IN
Butler County Emergency Management	IA	Effingham County Emergency Management Agency	IL	Indianapolis Metropolitan Police Department	IN
Clear Lake Fire Department	IA	Elgin Fire Department	IL	Jackson County Sheriff	IN
Council Bluffs Fire Department	IA	Evergreen Park Fire Department	IL	Jasper County Sheriff	IN
Decorah Fire Department	IA	Forest Park Police Department	IL	La Porte Fire Department	IN
Dickinson County Department of Emergency Management	IA	Franklin County Sheriff	IL	Lebanon Police Department	IN
Dubuque Fire Department	IA	Glenview Fire Department	IL	Madison County Emergency Management	IN
Dubuque Police Department	IA	Granite City Police Department	IL	Noble County Sheriff's Department	IN
Fayette County Sheriff	IA	Gurnee Police Department	IL	Perry County Emergency Management Agency	IN
Floyd County Emergency Management	IA	Hanover Park Police Department	IL	Porter County Sheriff	IN
Jasper County Emergency Management Agency	IA	Huntley Fire Protection District	IL	Princeton Fire Territory	IN
Jefferson County Sheriff Office	IA	Illinois State Police	IL	Richmond Fire Department	IN
Jones County Sheriff	IA	Jo Daviess County Sheriff	IL	Richmond Police Department	IN
Kossuth County Sheriff's Department	IA	Kendall County Sheriff	IL	Ripley County Sheriff	IN
Mitchell County Emergency Services	IA	Keweenaw Police Department	IL	Tippecanoe County Sheriff's Office	IN
Perry Fire Department	IA	Lake County Major Crash Assistance Team	IL	Valparaiso Police Department	IN
Polk County Emergency Management	IA	Madison County Sheriff	IL	Vanderburgh County Emergency Management Agency	IN
Sioux County Sheriff	IA	Naperville Fire Department	IL	Vanderburgh County Sheriff	IN
Storm Lake Police Department	IA	Northbrook Police Department	IL	Vigo County Sheriff	IN
Waterloo Fire Department	IA	Ogle County Sheriff	IL	Warrick County Sheriff's Office	IN
Winthrop Fire Department	IA	Orland Fire Protection District	IL	Wayne Township Fire Department	IN
Ada County Sheriff	ID	Orland Park Police Department	IL	Zionsville Fire Department	IN
Bannock County Sheriff	ID	Plainfield Fire Protection District	IL	Cheyenne County Sheriff	KS
Blaine County Search and Rescue	ID	Pontiac Police Department	IL	Dodge Police Department	KS
Canyon County Sheriff	ID	Robinson Police Department	IL	Galena Fire Department	KS
Gem County Sheriff	ID	Rockford Fire Department	IL	Harvey County Emergency Response Team	KS
Idaho Falls Police Department	ID	Rockford Police Department	IL	Johnson County Sheriff	KS
Idaho State Police	ID	Romeoville Fire Department	IL	Kansas City Police Department	KS
Meridian Police Department	ID	Streator Fire Department	IL		
Nampa Police Department	ID	Utica Fire Protection District	IL		
		Winnetka Fire Department	IL		
		Angola Police Department	IN		
		Bargersville Community Fire Department	IN		



Kansas Fire Marshall	KS	Brewster Ambulance Service	MA	Douglas County Sheriff	MN
Leavenworth Police Department	KS	Bridgewater Emergency Management	MA	Duluth Fire Department	MN
Lenexa Fire Department	KS	Massachusetts State Department of Fire Services	MA	Freeborn County Sheriff	MN
Lenexa Police Department	KS	Massachusetts State Police	MA	Goodhue County Sheriff	MN
Marion County Emergency Management	KS	Oxford Police Department	MA	Hamel Fire Department	MN
Olathe Police Department	KS	Peabody Fire Department	MA	Hennepin County Sheriff's Office	MN
Osage County Sheriff	KS	Springfield Fire Department	MA	Hubbard County Sheriff	MN
Riley County Police Department	KS	Swansea Police Department	MA	Marshall County Sheriff	MN
Shawnee County Sheriff	KS	Town of Hanover Emergency Management	MA	Morrison County Sheriff	MN
Sumner County Sheriff	KS	Watertown Fire Department	MA	Nicollet County Sheriff	MN
Topeka Police Department	KS	Wayland Fire Department	MA	Otter Tail County Sheriff	MN
Cincinnati Northern Kentucky International Airport Police	KY	Westfield Police Department	MA	Owatonna Police Department	MN
Edmonson County Sheriff	KY	Yarmouth Police Department	MA	Perham Fire Department	MN
Georgetown Police Department	KY	Annapolis Office of Emergency Management	MD	Pipestone County Sheriff	MN
Graves County Sheriff	KY	Carroll County Sheriff and EMS Department	MD	Polk County Sheriff	MN
Hazard Police Department	KY	Cecil County Sheriff	MD	Renville County Sheriff	MN
Jeffersontown Police Department	KY	Charles County Sheriff and EMS	MD	Rochester Police Department	MN
Kentucky State Police	KY	Montgomery County Fire and Rescue Department	MD	St. Cloud Police Department	MN
Louisville Fire and Rescue	KY	St. Mary's County Sheriff	MD	Stearns County Sheriff's Office	MN
Munfordville Police Department	KY	Brunswick Police Department	ME	Washington County Sheriff	MN
Rowan County Emergency Management	KY	Maine State Police	ME	Willmar Police Department	MN
Somerset Police Department	KY	York County Emergency Management Agency	ME	Windom Police Department	MN
Assumption Parish Sheriff	LA	Almont Police Department	MI	Winona County Sheriff	MN
Bossier Fire Department	LA	Battle Creek Police Department	MI	Wright County Sheriff	MN
Bossier Parish Sheriff	LA	Berrien County Sheriff	MI	Boone County Fire Department	MO
East Baton Rouge Parish Sheriff	LA	Big Rapids Township Fire Department	MI	Camden County Sheriff	MO
Grant Parish Sheriff	LA	Farmington Police Department	MI	Cole County Emergency Response Team	MO
Jefferson Parish Sheriff	LA	Grand Rapids Fire Department	MI	Creve Coeur Police Department	MO
Lockport Volunteer Fire Department	LA	Grand Traverse County Sheriff	MI	Henry County Emergency Management	MO
Louisiana State Fire Marshal	LA	Kent County Sheriff	MI	Indian Point Police Department	MO
Rapides Parish Sheriff	LA	Mason County Sheriff	MI	Jackson County Sheriff	MO
Red River Parish Sheriff	LA	Michigan State Police	MI	Jasper County Sheriff	MO
Slidell Police Department	LA	Monroe County Sheriff	MI	Kansas City Missouri Police Department	MO
St Charles Parish Sheriff	LA	Oakland County Fire	MI	Lafayette County Sheriff	MO
St James Parish Sheriff	LA	Oakland County Sheriff	MI	Logan Rogersville Fire Department	MO
St John the Baptist Parish Sheriff	LA	Tuscola County Sheriff	MI	Maryville Department of Public Safety	MO
St Martin Parish Sheriff	LA	Anoka County Emergency Management	MN	Missouri State Highway Patrol	MO
Thibodaux Police Department	LA	Anoka County Sheriff	MN	Perry County Sheriff	MO
Vidalia Police Department	LA	Big Lake Police Department	MN	Polk County Office of Emergency Management	MO
Andover Police Department	MA	Clay County Sheriff	MN	Randolph County Sheriff	MO
Attleboro Police Department	MA	Dakota County Sheriff	MN	Scott County Sheriff	MO
Barnstable Police Department	MA			Springfield Fire Department	MO
Beverly Emergency Management Department	MA			St. Louis County Police Department	MO
Boston Police Department	MA				

Stoddard County Sheriff	MO	Bellevue Fire Department	NE	Livingston County Sheriff	NY
University City Fire Department	MO	Buffalo County Sheriff	NE	Manlius Fire Department	NY
Wentzville Police Department	MO	La Vista Police Department	NE	Monroe County Sheriff	NY
Adams County Sheriff	MS	Region 21 Emergency Management	NE	Nassau County Police Department	NY
Calhoun County Emergency Management Agency	MS	Sarpy County Sheriff	NE	New Rochelle Police Department	NY
Desoto County Emergency Management	MS	Waterloo Fire Department	NE	New York City Fire Department	NY
Flowood Police Department	MS	Danville Police Department	NH	New York State Police	NY
Gulfport Fire Department	MS	Exeter Fire Department	NH	Niagara County Sheriff	NY
Mississippi State Fire Academy	MS	Lancaster Fire Department	NH	Orange County Emergency Services	NY
Monroe County Search and Rescue Team	MS	Webster Fire Department	NH	Oswego County Sheriff	NY
Pascagoula Law Enforcement	MS	Bergen County Office of Emergency Management	NJ	Peekskill Police Department	NY
Prentiss County Sheriff	MS	Brick Township Police Department	NJ	Richmond County District Attorneys Office	NY
Rankin County Sheriff	MS	Camden County	NJ	Rome Police Department	NY
Great Falls Police Department	MT	Gloucester County Emergency Response	NJ	Saratoga County Sheriff	NY
Stillwater County Sheriff	MT	Hawthorne Fire Department	NJ	Suffolk County Police Department	NY
Bertie County Sheriff	NC	Holmdel Township Office of Emergency Management	NJ	Ulster County Sheriff	NY
Carova Beach Volunteer Fire & Rescue	NC	Middlesex Sheriff	NJ	Utica Police Department	NY
Cleveland County Sheriff	NC	Millstone Valley Fire Department	NJ	Washington County Department of Public Safety	NY
Durham Fire Department	NC	Ocean County Sheriff	NJ	West Seneca Police Department	NY
Fayetteville Police Department	NC	River Vale Police Department	NJ	Yorktown Police Department	NY
Granite Falls Fire Department	NC	Saddle River Office of Emergency Management	NJ	Allen County Emergency Management Agency	OH
Guilford County Sheriff	NC	Somerset County Sheriff's Office	NJ	Auglaize County Sheriff	OH
Harnett County Emergency Services	NC	Wyckoff Fire Department	NJ	Avon Police Department	OH
Hendersonville Police Department	NC	New Mexico State Police	NM	Beavercreek Police Department	OH
Iredell County Sheriff	NC	New Mexico State University Police	NM	Blue Ash Police Department	OH
Johnston County Sheriff	NC	Carson City Fire Department	NV	Butler County Sheriff's Office	OH
Kinston Police Department	NC	Clark County Fire Department	NV	Cincinnati Police Department	OH
Lenoir County Emergency Services	NC	Elko County Sheriff	NV	Cleveland Police Department	OH
Moore County Sheriff	NC	Henderson Fire Department	NV	Coshocton County Sheriff	OH
New Hanover County Emergency Management	NC	Las Vegas Metropolitan Police Department	NV	Cuyahoga Community College Police Department	OH
North Carolina Department of Public Safety	NC	Nevada Highway Patrol	NV	Darke County Sheriff	OH
Randolph County Sheriff	NC	Reno Fire Department	NV	Dayton Fire Department	OH
Wake Forest Fire Department	NC	Washoe County Emergency Management and Homeland Security	NV	Erie County Sheriff	OH
Wayne County Sheriff	NC	Albany County Sheriff	NY	Fremont Police Department	OH
Wrightsville Beach Fire Department	NC	Cayuga County Sheriff	NY	Geauga County Sheriff	OH
Billings County Sheriff	ND	Clarkstown Police Department	NY	Guernsey County Sheriff	OH
Burleigh County Sheriff	ND	Elmira Police Department	NY	Hamilton County Sheriff	OH
Cass County Sheriff	ND	Fulton County Sheriff	NY	Huron County Sheriff	OH
Fargo Fire Department	ND	Greenburgh Police Department	NY	Independence Fire Department	OH
Grand Forks Sheriff	ND	Greene County Sheriff	NY	Lake County Public Safety Office	OH
Morton County Sheriff	ND	Jamestown Police Department	NY	Logan Police Department	OH
				Mahoning County Sheriff	OH
				Medina County Sheriff Office	OH

Mercer County Sheriff	OH	North Lincoln Fire and Rescue	OR	Warren County Department of Public Safety	PA
Northwood Police Department	OH	Oregon Police Department	OR	Aiken County Sheriff	SC
Ohio Attorney General's Office	OH	Oregon State Police	OR	Anderson County Sheriff	SC
Oregon Police Division	OH	Tualatin Valley Fire and Rescue	OR	Berkely County Resuce	SC
Ottawa County Sheriff	OH	Umatilla County Sheriff	OR	Cherokee County Sheriff	SC
Parma Police Department	OH	Allegheny County	PA	Florence County Emergency Response Team	SC
Putnam County Sheriff	OH	Association of Blair County Law Enforcement	PA	Goose Creek Fire Department	SC
Richland County Sheriff	OH	Back Mountain Community Partnership	PA	Greenville County Sheriff	SC
Shelby County Sheriff	OH	Beaver County Emergency Services	PA	Horry County Fire Rescue	SC
Streetsboro Police Department	OH	Bethlehem Police Department	PA	Horry County Police Department	SC
Toledo Police Department	OH	Blakely Ambulance and Rescue	PA	Jasper County Emergency Services	SC
Union County Sheriff	OH	Chambersburg Fire Department	PA	Mount Pleasant Police Department	SC
Washington County Sheriff	OH	Chester County Department of Emergency Services	PA	Murrells Inlet Garden City Fire District	SC
Willoughby Fire Department	OH	Chester County Sheriff	PA	Myrtle Beach Police Department	SC
Wood County Sheriff	OH	Coolbaugh Township Volunteer Fire Department	PA	Pickens County Sheriff	SC
Broken Arrow Police Department	OK	Crafton Police Department	PA	Richland County Sheriff	SC
Canadian County Department of Emergency Management	OK	Delaware County Department of Emergency Services	PA	South Carolina Highway Patrol	SC
Choctaw County Emergency Management Agency	OK	Dover Township Fire Department	PA	York County Sheriff	SC
Choctaw County Sheriff	OK	Greensburg Fire Department	PA	Brookings Fire Department	SD
Delaware County Sheriff	OK	Hazmat 2 Environmental Fire Rescue	PA	Brown County Emergency Management	SD
Duncan Police Department	OK	Lehigh County Emergency Management	PA	Davison County Search and Rescue	SD
Grant County Emergency Management	OK	Lehigh University Police Department	PA	Lincoln County Emergency Management Department	SD
Miami Police Department	OK	Lower Makefield Township Police Department	PA	South Dakota Highway Patrol	SD
Pittsburg County Emergency Management	OK	Montgomery County Correctional Facility	PA	Union County Sheriff	SD
Pottawatomie County Sheriff	OK	Montgomery County Department of Public Safety	PA	Bartlett Police Department	TN
Rogers County Sheriff	OK	Montgomery County Sheriff	PA	Blount County Rescue Squad	TN
Sapulpa Police Department	OK	Mount Carmel Township Police Department	PA	Bristol	TN
Stillwater Emergency Management Agency	OK	Murrysville Police Department	PA	Carter County Sheriff	TN
Tulsa Fire Department	OK	Northern Regional Police Department	PA	Columbia Fire Department	TN
Bend Police Department	OR	Phoenixville Police Department	PA	Crossville Police Department	TN
Benton County Sheriff	OR	Pittsburgh Public Safety Department	PA	Dickson County Sheriff	TN
Cannon Beach Rural Fire Protection District	OR	Scranton Police Department	PA	Hamilton County Emergency Services	TN
Coos County Sheriff	OR	Southern Chester County Regional Police Department	PA	Hamilton County Sheriff	TN
Deschutes County Sheriff	OR	Susquehanna County District Attorneys Office	PA	Hawkins County Sheriff	TN
Eugene Springfield Fire Department	OR	Upper Uwchlan Police Department	PA	Johnson City Police Department	TN
Gresham Police Department	OR			Memphis Police Department	TN
Hamlet Fire Department	OR			Oak Ridge Fire Department	TN
Jackson County Fire Department	OR			Obion County Sheriff	TN
Jackson County Sheriff's Search and Rescue	OR			Rutherford County EMS	TN
Jefferson County Sheriff	OR			Rutherford County Sheriff	TN
Juniper Flat Rural Fire Protection District	OR			Spring Hill Police Department	TN
Lincoln County Sheriff	OR				

Wayne County Sheriff	TN	Mansfield Fire Department	TX	Fairfax Fire and Rescue Department	VA
Williamson County Sheriff	TN	Mansfield Police Department	TX	Fredericksburg Police Department	VA
Abilene Police Department	TX	McAllen Independent School District Police Department	TX	George Mason Police Department	VA
Argyle Fire District	TX	Midland County Sheriff	TX	Grayson County	VA
Arlington Police Department	TX	Montgomery County Sheriff	TX	Harrisonburg Police Department	VA
Athens Fire Department	TX	Navarro County Sheriff	TX	Henrico County	VA
Austin Fire Department Robotics Emergency Deployment Team	TX	Nueces County Sheriff	TX	Loudoun County Sheriff	VA
Bastrop County Emergency Services District 2	TX	Paris Fire Department	TX	Martinsville Fire and EMS	VA
Beaumont Police Department	TX	Pecos Police Department	TX	Middlesex County Sheriff	VA
Brazoria County	TX	Prosper Fire Department	TX	Petersburg Police Department	VA
Brown County Sheriff	TX	Reeves County Sheriff	TX	Pittsylvania County Sheriff	VA
Brownsville Fire Department	TX	Sabine Volunteer Fire Department	TX	Prince George County Fire and EMS	VA
Bryan Fire Department	TX	San Marcos Police Department	TX	Richmond Fire Department	VA
Burleson County Sheriff	TX	Smith County Sheriff	TX	Rockingham County Department of Fire and Rescue	VA
Burleson Fire Department	TX	Somervell County Emergency Management	TX	Russell County Sheriff	VA
Corpus Christi Fire Department	TX	South Padre Island Police Department	TX	Spotsylvania Sheriff	VA
Corpus Christi Police Department	TX	Temple Police Department	TX	Stafford County Sheriff	VA
Denton County Emergency Services	TX	Texas City Emergency Management	TX	Tazewell County Sheriff	VA
DeWitt County Sheriff	TX	Texas Department of Public Safety	TX	Virginia Beach Fire Department	VA
Ector County Sheriff	TX	Texas Parks and Wildlife Department	TX	Virginia Beach Police Department	VA
El Paso Fire Department Special Ops	TX	Texas State Fire Marshals Office	TX	Virginia Department of Emergency Management	VA
Everman Police Department	TX	Tom Green County Sheriff	TX	York County Emergency Management Agency	VA
Fort Bend County Office of Emergency Management	TX	Tyler Police Department	TX	Grand Isle County Sheriff	VT
Fort Worth Fire Department	TX	Victoria Police Department	TX	Adams County Sheriff	WA
Goliad County Sheriff	TX	Webster Police Department	TX	Auburn Police Department	WA
Harris County Sheriff	TX	Wichita Falls Fire Department	TX	Clark County Sheriff	WA
Heath Department of Public Safety	TX	Wood County Sheriff	TX	Cowlitz County Sheriff	WA
Hewitt Police Department	TX	Beaver County Sheriff	UT	Grant County Sheriff	WA
Hill County Emergency Management	TX	Box Elder County Sheriff	UT	Kitsap County Sheriff	WA
Hopkins County Sheriff	TX	Davis County Sheriff	UT	Lakewood Police Department	WA
Houston Fire Department	TX	Lindon City Police	UT	Pullman Police Department	WA
Hurst Fire Department	TX	Orem Police Department	UT	Renton Police Department	WA
Hurst Police Department	TX	Provo Police Department	UT	Skagit County Sheriff	WA
Johnson County Emergency Management	TX	Utah County Sheriff	UT	Snohomish County Fire Protection District #22	WA
Joshua Fire Department	TX	Utah Division of Emergency Management	UT	Spokane Fire Department	WA
Kilgore Fire Department	TX	Utah Highway Patrol	UT	Tukwila Police Department	WA
La Porte Fire Department	TX	Albemarle County Fire and Rescue	VA	Wahkiakum County Department of Emergency Management	WA
Lake Jackson Police Department	TX	Albemarle County Sheriff	VA	Adams County Sheriff	WI
Lamar County	TX	Bedford Fire Department	VA	Appleton Fire Department	WI
Laredo Police Department	TX	Caroline County Department of Fire, Resuce & Emergency Management	VA	Barron County Sheriff	WI
Liberty County Sheriff	TX			Brillion Police Department	WI
Lubbock Police Department	TX			Chippewa County Sheriff	WI

Columbia County Sheriff	WI	Waterloo Fire Department	WI
Columbus Fire Department	WI	Waukesha Police Department	WI
Crawford County Emergency Management	WI	West Salem Police Department	WI
Dane County Emergency Management	WI	Weyauwega Police Department	WI
Dodge County Sheriff	WI	Wisconsin State Capitol Police	WI
Door County Sheriff	WI	Wood County Sheriff	WI
Eau Claire County Sheriff	WI	Cabell County Emergency Management	WV
Elk Mound Police Department	WI	Kanawha County Sheriff	WV
Fond du Lac County Sheriff	WI	South Charleston Fire Department	WV
Footville Fire Department	WI	Casper Police Department	WY
Forest County Sheriff	WI	Cheyenne Fire Department	WY
Franklin Police Department	WI		
Grant County Emergency Management	WI		
Green Lake County Sheriff	WI		
Greenfield Police Department	WI		
Jackson County Sheriff	WI		
Janesville Fire Department	WI		
Janesville Police Department	WI		
Kewaunee County Sheriff	WI		
Lake Geneva Police Department	WI		
Lincoln County Sheriff	WI		
Linn Police Department	WI		
Madison Police Department	WI		
Manitowoc Police Department	WI		
Marathon County Sheriff	WI		
Middleton Fire Department	WI		
Minocqua Fire Department	WI		
Muskego Police Department	WI		
Neenah Police Department	WI		
Newbold Fire Department	WI		
Oconto County Sheriff	WI		
Oostburg Fire Department	WI		
Outagamie County Sheriff	WI		
Plover Police Department	WI		
Price County Sheriff	WI		
Racine County Sheriff	WI		
Ripon Fire Department	WI		
Rock County Sheriff	WI		
Sauk County Sheriff	WI		
Shawano County Sheriff	WI		
Sheboygan County Sheriff	WI		
Superior Police Department	WI		
Trempealeau County Sheriff	WI		
Walworth County Sheriff	WI		
Washington County Sheriff	WI		

## APPENDIX 2: PUBLIC SAFETY MANNED AVIATION\*

- As of April 2018, there are approximately 338 departments—288 local and 50 state public safety agencies—that own manned aircraft according to the FAA’s Aircraft Registry. These departments own a total of 1,150 fixed- and rotary- wing aircraft.
- One-in-five manned aircraft registered to a government agency belongs to a state or local public safety department.
- Agencies in three states—California, Florida, and Texas—own 40 percent of all aircraft registered to public safety departments.
- The state agency with the most number of aircraft is the Alaska Department of Public Safety (34 aircraft). The county or municipal agency with the most aircraft is the Los Angeles County Sheriff (24 aircraft). The average number of aircraft per agency is 3.4.
- The 288 county and municipal public safety departments with manned aircraft are located in 233 counties. The 50 statewide agency public safety departments are located in 44 states.
- Approximately 72 percent of all manned public safety aircraft registered with the FAA are rotary-wing aircraft. The single most common aircraft among public safety departments is the Bell OH-58 Kiowa helicopter, of which there are 235 currently in service.
- Between 2008 and 2018, the average age of public safety manned aircraft increased from 17 to 20 years. The total number of aircraft and agencies operating manned aircraft has not changed significantly in this period.
- As of March 2018, 155 state and local public safety agencies had received 412 manned aircraft from the Department of Defense through the 1033 program, although it was not immediately clear whether all of these aircraft had active N-number registrations.

\*Source: Federal Aviation Administration Aircraft Registry for 2008, 2013, and April 2018. The 2018 data includes 47 aircraft for which the registration is nearing expiration. It does not include aircraft with expired registrations. Nor does it include aircraft that are operated by local agencies but that are registered by federal agencies or EMS aircraft registered to private entities. In a few cases, the FAA’s N-number data was checked against other source material such as photographs of the aircraft to confirm ownership. For the full database, please contact the Center for the Study of the Drone. The Department of Defense’s Law Enforcement Support Office property transfer data is [available here](#).



Photo by Christopher Ebdon/Flickr

### Public Safety Agencies with Manned Aircraft

Agency Type	Agencies
County Police and Sheriff	189
Municipal Police	79
Fire and EMS	18
City/County Emergency Management	2
Statewide Agency	50

### Manned Aircraft Type

Aircraft Type	Aircraft
Rotary-Wing	828
Single-Engine Fixed-Wing	272
Multi-Engine Fixed-Wing	45
Other	5

### Manned Aircraft by Agency Type

Agency Type	Aircraft
County Police and Sheriff	487
Municipal Police	238
Fire and EMS	47
City/County Emergency Management	3
Statewide Agency	375

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