

2022 END OF YEAR REPORT: FIRE DIVISION

ARIZONA DEPARTMENT OF
FORESTRY AND FIRE
MANAGEMENT






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AGENCY OVERVIEW:

The Arizona Department of Forestry and Fire Management provides resources for the prevention and suppression of wildland fire on State Trust Lands and private property located outside incorporated communities. The agency provides fire prevention, education and outreach, public information, along with forest health components, and numerous grant opportunities.

During FY 2021, as part of a special legislative session, additional suppression funding was approved for the department. Under House Bill 2001, the agency was allocated an additional \$19 million in monies due to ever-increasing wildland firefighting costs.

Suppression costs continue to climb as large-scale, long duration incidents increase every year. Rising costs for aircraft, cooperating fire departments and district personnel and equipment also play a factor in increasing suppression costs.

AGENCY AND FINANCIAL HIGHLIGHTS:

FY 2022 Fire Suppression Budget: \$23,000,000

Actual Spent: \$9,373,512

FY 2021 Fire Suppression Budget: \$23,000,000

Actual Spent: \$15,778,787

FY 2020 Fire Suppression Budget: \$4,000,000

Actual Spent: \$12,330,891



AGENCY OVERVIEW CONT:

ACTIVE EMPLOYEES*:

FY 2022: 134

FY 2021: 127

FY 2020: 88

*Active employees include, FTEs, seasonal workers, and temporary

The Department of Forestry and Fire Management maintains wildfire protection on 22-million acres of State Trust and private lands. The wildland fire division includes:

- 5 district offices: Northern, Northeastern, Southern, Central and Northwestern Arizona
- 12 - Type 2 Wildland Fire Inmate Hand Crews (approx. 240 personnel)
- 1 - Type 2-1A Hand Crew (20 personnel)
- Established UAS program
- Fixed-Wing Aviation program
- Cooperative agreements provide DFFM access to 2,700 fire department/district wildland firefighters and 3,000 pieces of equipment
- Arizona Dispatch Center - State dispatching center



A DFFM Douglas Crew firefighter checking for hotspots on the Elgin Bridge Fire near Sonoita



EXECUTIVE SUMMARY:

During the winter of 2021-2022, the return of La Nina across Arizona set the stage for a potential early start to the fire season in some areas. La Nina conditions resulted in a lack of rain and heavy snow pack, along with warmer-than-normal temperatures. Those conditions, including little to no moisture in February proceeded to quickly reduce the already minimal snowpack levels in the high country and further exasperated conditions across the northern portion of the state.

The stagnant and lingering La Nina also presented the potential for an active few months of fire during the April to June timeframe. And in April, two back to back fires in northern Arizona laid the foundation for potentially another active and destructive fire season. On Sunday, April 17, 2022, the 19,000+ acre Tunnel Fire ignited on the Coconino National Forest, approximately 14 miles northeast of Flagstaff. The next day, the Crooks Fire started on the Prescott National Forest. That fire grew to about 9,000 acres before both fires were fully suppressed in June.

Down south, crews stayed busy between May and June as fire activity continued daily. As summer approached and temperatures continued to rise, the potential for large scale fires persisted throughout Arizona. Due to that, the Arizona Department of Forestry and Fire Management along with local and federal cooperators overloaded resources in the initial attack phases of incidents to prevent fires from gaining ground and burning large swaths of land. The abundance of ground and air resources allowed crews to keep fires manageable by local DFFM districts or at the Type 3 level.



EXECUTIVE SUMMARY CONT:

In 2022, the number of new fire starts decreased by 10% as compared to the previous year. The number of acres burned also saw a significant drop; decreasing by nearly 62% versus 2021.

A heavy initial attack process, coupled with increased prevention and outreach messaging and engagement, along with the possibility of a lack of ignitions in heavy fuel beds kept fire activity lower than the past few years.

This summer's monsoon season arrived on time and by July, consistent and heavy rains plus increased relative humidities played a role in quickly putting an end to the 2022 fire season.



The AZ Department of Forestry and Fire Management's Phoenix Crew getting briefed before an incident

The state received much needed moisture throughout the entirety of the 2022 monsoon season.

However, as with all heavy rains, that precipitation created another batch of fine fuel across the southern area of the state, including throughout the Sonoran Desert.

Once monsoon season ended, dry and warm conditions prevailed and by October, Southern Arizona started to see an uptick in fire activity. Fall and winter starts were kept at a minimal amount of acres. One incident, the Taylor Fire, on October 30, grew to nearly 200 acres before forward progress was stopped.



2022 FIRE DATA:

The 2022 Arizona fire season saw moderate to high fire activity, but not as severe as the spring wildland fire outlook had indicated it to be.

The southern region of the state had another year of active wildland fire incidents due to the amount of fine fuel loading across that area. However, from a 24,000-foot view, and in comparison to prior years, the amount of fires across the state and the number of acres burned were substantially lower than the last few years.

In 2022, the state reported 1,444 wildfires on all land jurisdictions for a total of 124,323 acres burned. During the previous year, there were 1,774 wildfires for a total of 524,428 acres burned.

FIRE STARTS: 1,444

HUMAN-CAUSED WILDFIRES: 951

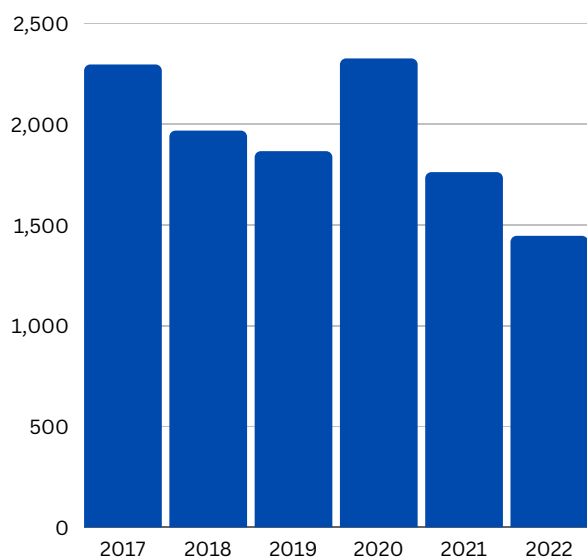
ACRES BURNED: 124,323

In 2022, the number of new fire starts decreased by 10% as compared to the previous year. The number of acres burned saw a significant drop; decreasing by nearly 62% in 2022 vs. 2021.

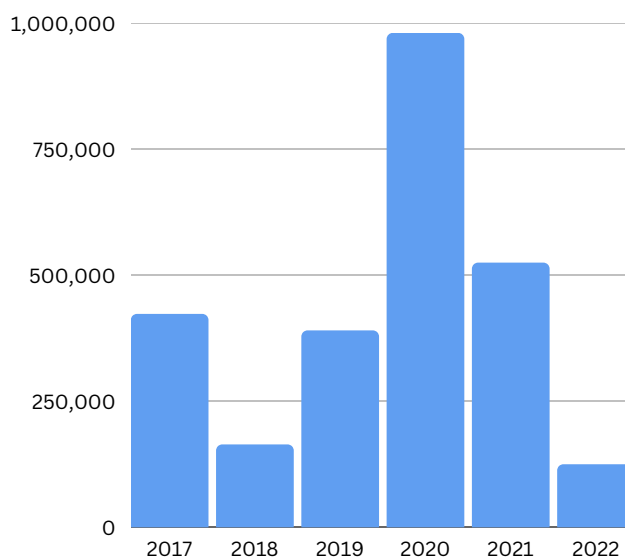
Numbers reflect all jurisdictions; state, federal and tribal lands



2022 FIRE DATA:

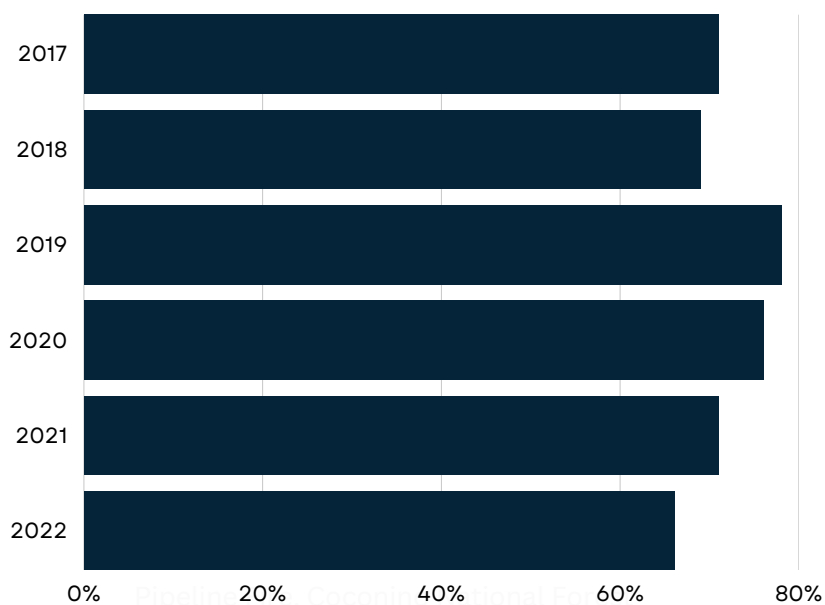


WILDFIRES



ACRES BURNED

HUMAN-CAUSED FIRES





2022 NOTABLE FIRES:

TUNNEL FIRE: 19,088 ACRES

- April 17, 2022
- 14 miles NE Flagstaff
 - Coconino National Forest

CROOKS FIRE: 9,402 ACRES

- April 18, 2022
- 11 miles S Prescott
 - Prescott National Forest

SAN RAFAEL FIRE: 11,620 ACRES

- May 7, 2022
- Sonoita/Elgin
 - AZ State

CONTRERAS FIRE: 29,482 ACRES

- June 11, 2022
- 20 miles E Sells
 - Bureau of Indian Affairs



2022 FIRE ASSISTANCE MANAGEMENT GRANT (FMAG) FIRES:

The Fire Management Assistance Grant Program (FMAG) provides federal assistance through the Federal Emergency Management Agency (FEMA) to the Department of Forestry and Fire Management, when applicable, for certain costs associated with wildland firefighting. The incident must meet certain criteria in order for DFFM to request the financial assistance. If and when an FMAG is approved, the disaster assistance grant provides up to a 75% FEMA federal cost share with DFFM covering the remaining 25% of state-incurred costs.

2022 FMAGS:

- Tunnel Fire, Coconino County: Fire Costs Undetermined*
- Crooks Fire, Yavapai County: Fire Costs Undetermined*
- Pipeline Fire, Coconino County: Fire Costs Undetermined*

2021 FMAGS:

- **Margo Fire, Pinal County:**
DFFM Fire Cost: \$787,269
FMAG: \$572,925
72% Reimbursement
- **Spur Fire, Yavapai County**:**
DFFM Fire Cost: \$188,063
FEMA Reimbursement N/A
- **Telegraph Fire, Gila and Pinal Counties:**
DFFM Fire Cost: \$11,000,000
FMAG: \$6,451,549
59% Reimbursement

*Total costs associated with fire suppression typically take between 1-2 years to finalize due to federal, state, and cooperator billing, including aircraft charges and other costs pertaining to the incident. Figures are approximate.

**Spur Fire initially approved for FMAG, but not pursued by DFFM. Fire determined to be started by the Bagdad Mine and the mine reimbursed the state for costs associated with fire suppression efforts.



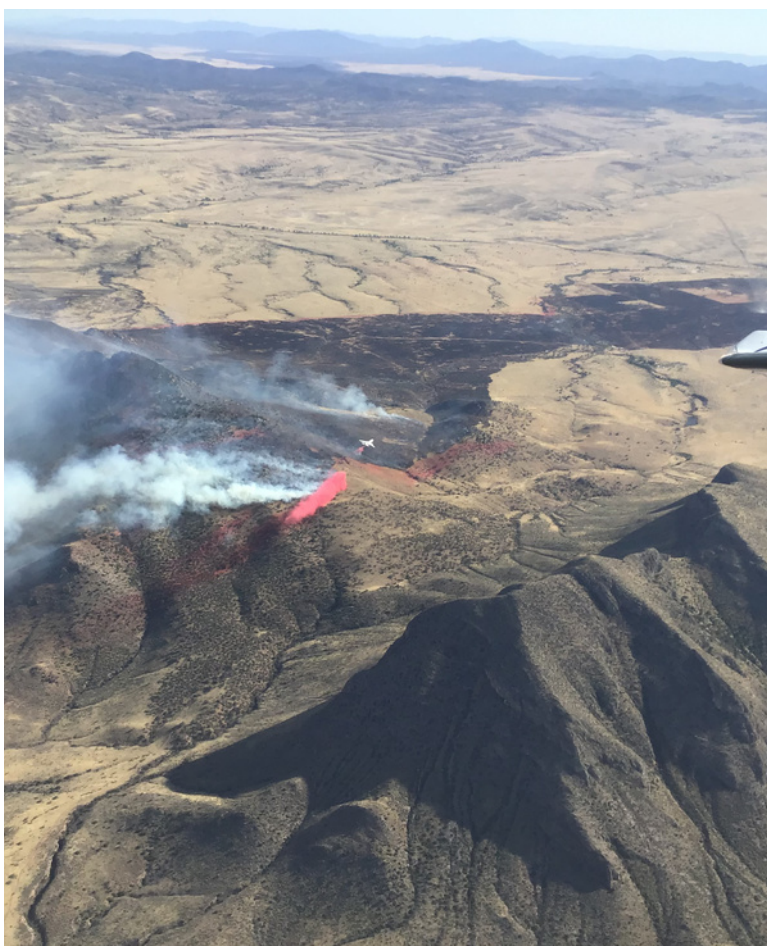
AVIATION:

The Arizona Department of Forestry and Fire Management's Fixed Wing Aviation program provides Air Attack (AA) platforms and Single Engine Air Tankers, or SEATs, to support the state, along with local, federal and tribal partners on wildfire incidents. Typically, both state and federally contracted aircraft arrive in April and are utilized as interagency air support throughout Arizona.

State SEATs and AA platforms are based out of local airports including Marana Regional Airport via state contracts with that airport.

Additionally, the state partners with the U.S Forest Service for heavy air tanker support services and the Bureau of Land Management for additional SEAT resources, if needed.

In 2022, and according to DFFM's State Aviation Manager, aircraft usage declined which correlated with the decreased amount of wildfires and acres burned throughout the state.



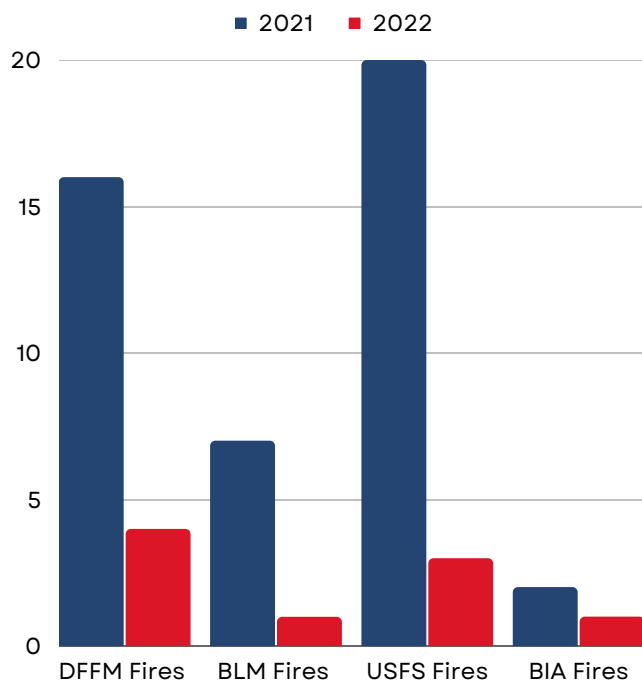
Air Attack operations monitoring a Very Large Air Tanker drop over the Elgin Bride Fire near Sonoita. Picture courtesy Air Attack



AVIATION DATA:

Single Engine Air Tanker SEATs Incident Response

(Total Fires Flown)



2021: 45
2022: 9

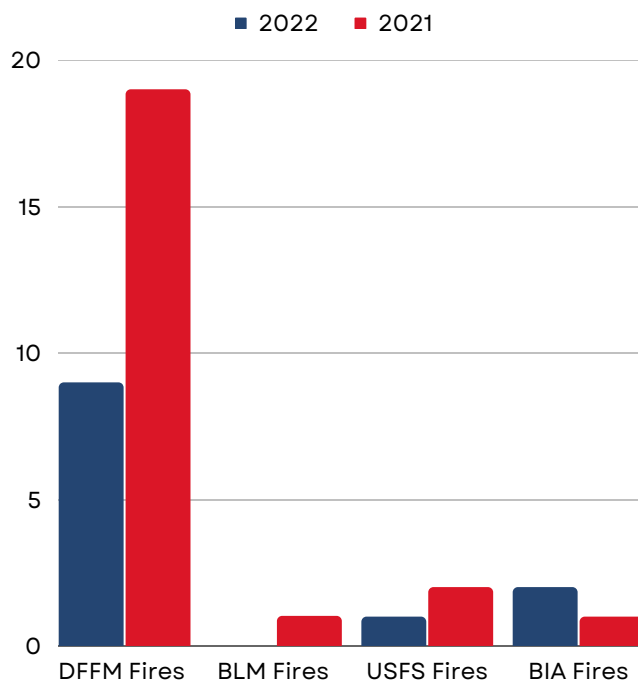
SEATs Flight Hours:

2021 Flight Hours: 108.83

2022 Flight Hours: 93.2

Air Attack (AA) Platform Incident Response

(Total Fires Flown)



2021: 23
2022: 12

AA Flight Hours:

2022 Flight Hours: 93.2

2021 Flight Hours: 108.83



AVIATION CONT:

In 2022, both the SEAT and AA platforms flew significantly less hours than in previous years. Due to the slower fire season, retardant usage also saw a significant reduction of 28% compared to 2021.

In 2022, DFFM spent nearly \$1.6 million for both aircraft and retardant usage as compared to the previous year's costs of \$1,990,458. And in 2020, the state spent \$2,003,817 in both aircraft and retardant usage costs. These dollar figures do not include the monies DFFM spent to utilize heavy airtankers contracted by the U.S. Forest Service.



Single Engine Air Tanker dropping retardant over a wildfire in Southern Arizona

2022 Total Retardant Used: 85,610*

2021 Total Retardant Used: 218,602*

2020 Total Retardant Used: 139,552*

*gallons



PREVENTION:

In the last few years, the Department's prevention program has grown from one prevention officer to a staff of four with additional personnel brought in to assist the team prior to and through fire season.

The program is responsible for a myriad of tasks including; community outreach and prevention education, the Firewise USA program - including property assessments, along with prevention patrols. Prevention officers are also assigned to wildland fire investigations and trained in accordance to

the National Wildfire Coordinating Group guidelines. Under the education scope of the program, prevention officers work with schools to provide wildland fire information to students. In addition, they provide outreach at different events throughout the state, including the annual Game and Fish Expo and the Arizona State Fair's Public Safety Days.

This year, they conducted 145 school presentations, community outreach events, and Firewise USA site visits. They also hosted 16 Firewise USA Assessor Trainings. In addition, the Prevention Division was able to bring 13 new Firewise USA sites on board for a total of 125 sites statewide. Some of the new 2022 communities include, Las Sendas in Mesa, Hidden Hills in Scottsdale, Buckhorn Legacy in Peeples Valley, Mount Elden Estates in Flagstaff, and Saguaro Hills in Tucson.



Prevention Office Derrick Piper working with a homeowner during a Firewise USA Assessor training



PREVENTION CONT:

Under the Firewise USA component, the division is responsible for enlisting new communities, by guiding homeowners and HOAs through the Firewise USA program via trainings and property assessments. While the prevention team works diligently to renew community memberships every year, often times, communities do fall out of the Firewise USA program for reasons such as change of HOA leadership, lack of community involvement, etc., and as was the case in 2022. While the team brought on 13 new communities, the number of Arizona Firewise USA sites remained at 125 due to non-renewals of some existing sites for miscellaneous reasons. DFFM holds the number one position in the Southwest for the amount of new Firewise USA sites that have recently come onboard the program.

During the roughly three months of fire restrictions in 2022, prevention officers made 19 patrol stops, which included face to face contacts with the public. Of those stops, eight were to extinguish abandoned campfires, three for illegal target shooting, and one was a roadside fire that the responding officer took command of.

The Prevention Division also handled seven wildfire investigations during the year including the Elgin Bridge and Taylor Fires in Southern Arizona.

New Firewise USA Communities Per Year:

2022:	13
2021:	12
2020:	5
2019:	16
2018:	15
2017:	12
2016:	4



FIREWISE USA
THE COMMUNITY STANDARD FOR WILDFIRE PREVENTION



WILDLAND FIRE TRAINING:

The Department of Forestry and Fire Management's Training Division is the main hub when it comes to wildland fire training for state and cooperating resources. The training division provides training courses and assists with Red Card support in accordance with the National Wildfire Coordinating Group standards.

A wide variety of courses are state-led or in conjunction-with cooperating fire departments that offer fire professionals the opportunity to increase their skill sets and earn the certifications necessary to not only do their current jobs, but to move forward in their firefighting careers.

DFFM also provides team and instructor support for the Arizona Wildfire and Incident Management Academy which supports nearly 800 students every year



	Jan-22	Apr-22	Jul-22	22-Oct			2022	
	QUALIFIED	QUALIFIED	QUALIFIED	QUALIFIED			Qualified	Trainee
ENGB	4	4	2	6	16	Engine Boss Position	16	34
OTHER SRB	3	6	7	4	20	Other Single Resource Boss Positions	20	16
OPS ABOVE SRB	3	6	2	5	16	Operations Positions Above Single Resource Boss	16	16
FALLERS	1	1	3	0	5	Faller Positions	5	6
C&G	4	5	4	6	19	Command & General Staff Positions	19	23
PLANS	4	0	0	3	7	Planning Positions	7	9
LOGS	1	3	2	3	9	Logistics Positions	9	12
FINANCE	0	0	2	2	4	Finance Positions	4	1
RX	0	0	0	0	0	Prescribed Burn Positions	0	0
DISPATCH	0	0	0	0	0	Dispatch Positions	0	0
	TRAINEE	TRAINEE	TRAINEE	TRAINEE				
ENGB	7	10	13	4	34			
OTHER SRB	5	9	2	0	16			
OPS ABOVE SRB	3	5	5	3	16			
FALLERS	1	3	2	0	6			
C&G	5	8	9	1	23			
PLANS	1	6	1	1	9			
LOGS	1	5	4	2	12			
FINANCE	0	0	1	0	1			
RX	0	0	0	0	0			
DISPATCH	0	0	0	0	0			



IN CONCLUSION:



The 2022 wildland fire outlook forecast a potentially active couple of months for the state. But, that forecast was just that. In reality, the number of fire starts decreased from 2021 as did the number of acres burned. While activity stayed steady across Southern Arizona it did not fully replicate the forecast provided by wildland fire analysts earlier that spring.

While the fire environment was certainly there, a lack of ignition sources in certain high risk areas coupled with increased public awareness and understanding of fire severity may have helped keep fire numbers low. The 2022 fire season was significantly less dramatic than initial indications.

However with all of 2022's monsoonal moisture, an extensive amount of unburned fine fuel currently exists across the Sonoran Desert and Southern Arizona. While it is too early to determine what is in store for the 2023 season, we know it will be fueled by the winter and spring conditions; winter precipitation amounts, fuel loading, temperature, and other criteria which factor into the seasonal outlook. Stay tuned.



IN MEMORIAM:



Mike Cherrington
BFFM Radio Technician
1962-2022

IMPORTANT LINKS

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Social Links

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- Facebook: Arizona Department of Forestry and Fire Management
- Instagram: [@forestryfireaz](https://www.instagram.com/forestryfireaz)
- YouTube: [@azforestryandfire](https://www.youtube.com/azforestryandfire)