Analysis Report
Report to State Emergency Council

November 2018

DEPARTMENT OF FORESTRY
AND FIRE MANAGEMENT

Fire Suppression
Deficit Spending
Analysis
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BACKGROUND

This analysis project was tasked by the State Emergency Council (Council)\(^1\) on June 21, 2018, at the third meeting of FY2018. There was a motion to conduct an:

1. Analysis that evaluates, quantifies, and demonstrates changes to operational elements that have resulted in the creation of new annual deficits stemming from consecutive years of over execution of the fire suppression budget by the Arizona Department of Forestry and Fire Management (DFFM)\(^2\); and

2. Provide this analysis report to the Council not later than the end of November of this calendar year.

All members of the Council unanimously approved the motion.

The agency [DFFM] had substantially exceeded the agency’s fire suppression budget during the last two fiscal years (FY17 & FY18), which required emergency fund dollars and special appropriations to be allocated to address suppression expenditures beyond the allocated budget. The Council felt these actions signaled a need to evaluate, quantify, and demonstrate the changes that resulted in the creation of these new annual deficits.

On August 7, 2018, a team initially convened to discuss this comprehensive analysis project that would result in a report to the Council. The group divided into four subgroups: Policy, Leadership, Operations, and Finance. The members were comprised of multiple subject-matter experts within the state enterprise.

Appropriate funding levels and quality operations and leadership of all state agencies is of the utmost importance to the state enterprise. The charge as per the Council’s direction is to quantify financial requirements for DFFM.

Key Findings

A rise in wildland fires has resulted in increased suppression costs.

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1) **DFFM is spending more money to fight/suppress wildland fires.** The rise in wildland firefighting costs is not isolated to Arizona. The western United States is experiencing drier, warmer climates with forests that have not been adequately maintained. DFFM has shifted its negotiating posture to pay its “fair share,” resulting in an increase in state spending on multi-jurisdictional wildfires that did not correlate to a proportional increase to agency suppression fund budget.

2) **DFFM staffing levels and salary requirements have increased, funded in large part by resources previously used to reimburse local cooperators.** While some of this spending growth is attributable to agency consolidation and agency leadership initiatives, DFFM has expanded the scope and size of the agency.

**Key Facts**

**State Trust Lands constitute 9.2 million acres** (12.7% of Arizona) of interspersed land, of which approximately 200,000 acres are considered forested with round-wood timber.

a) For comparison, the U.S. Forest Service holds roughly 11.3 million acres across six National Forests, and BLM manages 12.2 million acres (total of 32.2% of Arizona).

b) **Arizona State Land Department (ASLD)**

3 **Commissioner** is the statutorily designated manager of State Trust Land.

‘Wildfire prevention’ is a large component of ‘land management’ and may include, but not be limited to, planning and zoning, fuels reduction projects, thinning pinyon-juniper, grazing lease management, prescribed burns, grass and soil restoration projects, and trespass management and cleanup. ASLD does engage in this kind of land management work, but the most visible and consequential emergencies in Arizona have centered on federal land (i.e. Rodeo-Chediski and Wallow Fires).

‘Wildfire suppression’ is considered a natural disaster response, managed by both DFFM and the Arizona Department of Emergency & Military Affairs (DEMA) with DFFM designated as the primary responder to address wildfire suppression (ESF#4) and DEMA

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supporting resource coordination for all emergency support functions\(^6\) (ESF#1-15) and the cascading effects to the community both during and following the event.

a) DEMA (Adjutant General)\(^7\) is the statutorily designated state entity responsible for natural disaster response, authorized to exercise the vested powers of the Governor.

b) DFFM (State Forester)\(^8\) is established in statute, having evolved into redundant state services of land management and wildland fire response coordination. That evolution has primarily occurred in the context of extraordinary natural disasters that have prompted the Executive and Legislative branches to respond to the issue of public land management (primarily, but not exclusively, federal land).

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\(^6\) Emergency support functions (ESF) are an organizational structure for providing emergency response and recovery support, and include specific actions required of the primary and support agencies for each ESF.


BUDGET OVERVIEW

The top chart depicts funding for DFFM. The agency budget is comprised of two funding sources: the General Fund and Non-Appropriated Funds that include the Fire Suppression Revolving Fund and Cooperative Forestry Fund.

The bottom chart displays a breakdown, by division, of the General Fund portion of DFFM’s FY 2019 budget.

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9 **Cooperative Forestry Fund**: Consists of passthrough monies to local governments and private parties for the purpose of wildland fire prevention and suppression. **Fire Suppression Fund**: Revenue is received from state appropriations and reimbursements from land owners and is used to fight wildland fires.
LAWS AND AUTHORITIES

Historical Background of Federal / State Law

Federal Law
Enabling Act of 1910 (P.L.61-2-219)\(^\text{10}\)

The state’s responsibility for managing timber and woody vegetation originates with the Enabling Act. The Enabling Act granted certain federal lands to the State of Arizona to hold in trust for the benefit of the common schools and other beneficiaries. The Enabling Act sets forth requirements for disposition of Trust lands and the products therefrom, including that the land, timber, and other products be appraised at their true value, cannot be sold for less than that amount, and must be sold at auction. The natural products from the Trust land (timber and other natural vegetation included), fall under the same disposition requirements as the land itself. This provision states that the land must be disposed of according to the terms outlined in the Enabling Act, “and that the natural products and money proceeds of any of said lands shall be subject to the same trusts as the lands producing the same.”

State Law
Arizona State Constitution, Article 10: State and School Lands\(^\text{11}\)

- The Arizona Constitution aligns with the Enabling Act, and ASLD is lead agent for Article 10 under the state’s Constitution.
- Article 10, Section 2 states that the sale of Trust land or anything of value from it in a manner contrary to the Enabling Act is a breach of trust.
- Article 10, Section 4 similarly restates the Enabling Act provision requiring timber and other products from the land to be appraised at their true value and sold for not less than that amount.

Arizona Revised Statutes\(^\text{12}\)

- A.R.S. § 37-102(A)\(^\text{13}\) delegates responsibility of managing State Trust Land to the ASLD, by

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\(^{13}\) Ibid
stating: “[t]he state land department shall administer all laws relating to lands owned by, belonging to and under the control of the state.”

- A.R.S. § 37-102(B) further provides that ASLD: “shall have charge and control of all lands owned by the state, and timber, stone, gravel and other products of such land.”
- A.R.S. § 37-481 re-emphasizes that the ASLD “shall conserve, sell or otherwise administer the timber products, stone, gravel and other products and property upon lands belonging to the state under rules, not in conflict with the enabling act and the constitution.”

Until the creation of DFFM, timber sales and wildfire management and prevention were within ASLD’s exclusive authority.

- In 1966, Arizona created the position of State Forester, a role and responsibility initially encompassed within the duties of the State Land Commissioner. The State Forester was a direct report to the State Land Commissioner, as that position still resided within ASLD.
- This legislation provided the State Forester with authority to prevent and suppress any wildfire on state and private land covered by a cooperative agreement with the local jurisdiction (former A.R.S. § 37-623).
  - In response to growing concerns about large-scale wildfire events, legislation was passed in 2004 to create the State Forester as a separate and distinct office within ASLD. It was at this time that ASLD’s Fire Management Division became the Office of the State Forester.
  - The 2004 legislation post-Rodeo-Chediski Fire, gave the State Forester additional responsibilities beyond wildfire prevention and suppression, writing and presenting an annual report on forestry issues, and providing technical advice to the people of the state on forestry matters (formerly A.R.S. § 37-622, now § 37-1302).
  - Governor Napolitano signed Executive Order 2004-21, which required the State Forester to report directly to the governor on policy matters involving wildfire prevention, management, and suppression while all administrative, operational, and management functions continued to be within the ASLD. This Executive Order was amended by Governor Napolitano on August 27, 2007, by Executive Order 2007-18 which established the Division of Forestry within the State Land Department.

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14 Ibid
16 This language was changed in 1974, giving the Forester authority to prevent and suppress wildfires on state and private lands located outside incorporated municipalities, others lands if subject to a cooperative agreement, or anywhere in Arizona if the Forester determines that it’s in the best interest of the state and is “immediately necessary to protect state lands.” A.R.S. § 37-1303(A).
In 2016, legislation was passed officially establishing DFFM as an agency independent of the ASLD and expanding DFFM’s mission by adding statutes that require the State Forester to:

- Provide resources for land management in addition to providing resources for the prevention and suppression of wildland fires on State Trust Land and on private property located outside of cities and towns (now A.R.S.§ 37-1301).
- Assist in the development of the forestry products industry in this state (now A.R.S. § 37-1302).
- Include in the Forester’s annual report to the legislature, information concerning all-hazards response issues (i.e., the array of threats and hazards that could threaten life and property), which is the responsibility of the Governor through DEMA.

As part of the FY-2017 budget, the Office of the State Fire Marshal (OFM) was combined with DFFM, and further expanded DFFM’s mission in two essential ways:

- In 2016, DFFM was established “to provide resources for land management and the prevention and suppression of wildland fires on state land and private property located outside of cities and towns.”
- In 2017, the law changed to remove the word “resources.” The result now states DFFM is established “to provide for land management and the prevention and suppression of wildland fires on State Trust land and private property located outside of cities and towns (A.R.S.§ 37-1301(A)). The new language creates duplicative management responsibility with ASLD.
- In addition, the law added language directing the State Forester to monitor and conduct forestry projects and wildfire prevention, mitigation, and suppression activities (A.R.S. § 37-1302(10)).
- The revised statute says that DFFM is responsible for “land management” though DFFM’s scope of land management responsibility is limited only to activities conducted in conjunction with or approval of the landowner or agency that controls the land.

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CRITICAL MISSION REQUIREMENTS

Opportunity for Increased Collaboration

There is considerable mission overlap in statute identified within this report, primarily about wildfire prevention and suppression activities. There is significant intersection between all three agencies (ASLD/DEMA/DFFM) in this mission requirement. Opportunity exists for increased state enterprise collaboration and sharing personnel resources to find unity of effort, messaging, and outreach to our collective community partners toward elevating prevention, mitigation, and advocacy for public action to advance the health of our forested areas within Arizona.

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<tr>
<th>Highlights</th>
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<tr>
<td><strong>OPERATIONS</strong></td>
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<tr>
<td>Function</td>
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<tr>
<td>Coordinate emergency management activities</td>
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<td>Coordinate cooperative disaster response effort of government agencies</td>
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<td>Coordinate emergency activities of all State agencies</td>
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<td>Land management, prevention &amp; suppression of wildland fires on State lands and private property outside cities and towns</td>
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<td>Monitor and conduct forestry projects and wildfire prevention, mitigation, and suppression activities</td>
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<td>Suppression of wildfires; powers and duties of state forester</td>
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<td>Administer State trust lands</td>
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<td>Control State lands and products of such land</td>
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<td>Conserve, sell, administer products of State land</td>
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The Legislature bestowed ASLD with “charge and control” over state land. ASLD grants and manages all uses on State Trust Land through leases and permits, and sometimes multiple land use instruments are issued for the same area of land, which would be unknown to other state agencies.

As a subset of “all-hazards” response, DEMA has coordinated throughout the history of the State Forester position to ensure the state is prepared and able to respond to the threat of wildfire as a subset of all-hazards response.
The emergency response functions of the state are bestowed upon the Governor per A.R.S. § 26-302, who may then delegate those powers to the Adjutant General, who may then further delegate to the Director of DEMA’s Division of Emergency Management. Through the powers vested in the Governor, A.R.S. § 26-305 states DEMA’s Division of Emergency Management “shall coordinate the cooperative effort of all governmental agencies including the federal government, this state and its political subdivisions to alleviate suffering and loss resulting from disaster.”

Through delegation of authority, DEMA is responsible to execute the vested powers of the Governor to prepare for and coordinate the collective effort of all governmental agencies to reduce the impact of disaster on persons or property (A.R.S. §§ 26-302, 26-305). The Director of Emergency Management is further charged to: “develop and test plans for meeting any condition (i.e. all-hazards) constituting a state of emergency, except those emergency plans specifically assigned by the governor to other state agencies” and to “coordinate the use of personnel, equipment, services and facilities by the state or political subdivisions in support of emergency response activities (A.R.S. § 26-306(A)(4), (8)).”

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FIRE SUPPRESSION COSTS

The primary factor driving the overall spend on wildfires is DFFM’s departure from policy as it relates to how much the state contributes to wildfires that occur over multiple jurisdictions. Instead of limiting state reimbursement for wildfire suppression to the appropriated $4.0 million, as was done previously (with rare exception during severe wildfires), DFFM leadership shifted its policy to align with federal cost apportionment policies resulting in a spike in state spending on wildfires.

In FY 2015, DFFM spent a total of $23.6 million to combat fires in the state. In comparison, $51.2 million was spent in FY 2018, an increase of 117%. The number of fires grew 17% from 261 in FY 2015 to 306 in FY 2018.  

In discussing this policy on October 10, 2018, DFFM provided materials to the Finance subgroup related to how the agency engages in cost sharing on major multi-jurisdictional wildfires. They noted that, based on federal policy changes, they have adopted the approach of ‘Cost Apportionment’ where costs are shared based on the suppression effort expended to protect each agency’s jurisdictional area of responsibility, including the threat to another agency’s jurisdictional areas of responsibility. Cost Apportionment is a more complex system of identifying agency cost share and will require specific knowledge and skills to facilitate.

DFFM cited the work experience of their employees as the foundation for negotiating fire costs on behalf of the state. DFFM explained that each fire is different based on complexity (which is a factor that DFFM does not currently track), and further stated that DFFM recently began accounting for this cost data during the 2018 wildfire season (FY 2018). DFFM also noted that the Cost Apportionment methodology is primarily applied to larger, multi-jurisdictional wildfires, which are a fraction of the 300+ wildfires that occur each year. For smaller, multi-jurisdictional fires, there is no standard way to negotiate fires; only an “ad-hoc” process is used that is heavily case dependent.

$^25$ Includes costs for state fires and pass through monies for federal fires.
RISK REDUCTION THROUGH MITIGATION

Hazardous Vegetation Removal (HVR) Program

The Hazardous Vegetation Removal program was established in the FY 2015 budget as a special line item within DFFM. Since inception, DFFM has been unable to fully expend the HVR appropriation. DFFM expended $996,600, or about 74% of its $1.3 million appropriation, in FY 2015; however, expenditures dropped to $611,400, or 45% of the total appropriation, in FY 2018. DFFM states that underutilizing the appropriation is a result of the long lead time associated with HVR projects and why the FY 2018 budget included a footnote making the appropriation for HVR non-lapsing for two years.

In FY 2017 and FY 2018, a total of 17,187 and 10,100 acres were treated, respectively. The Office of Strategic Planning and Budget (OSPB) was unable to obtain data from DFFM for the number of acres treated in FY 2015 and FY 2016.

A review of FY 2018 spending reveals that 19 DFFM staff in a full- or part-time capacity are funded through the HVR program special line item. Based on DFFM projections, $604,000, or 45% of the $1.3 million appropriation, will be allocated to payroll and obligations from the FY 2017 fire debt. Only $448,300, or 33% of FY 2018 HVR funds, will be allocated to project implementation that entails hand and mechanical treatments ranging from $41 per acre in Willcox to $1,000 per acre on Tatum State Trust Land. While DFFM’s expenditure plan for FY 2019 increases project implementation spending to $988,500, or 49% of the $2.0 million HVR appropriation, DFFM staffing and specific other “program support” costs such as vehicle replacement and “State Forester Planning” amounts to $962,582, or 48% of total program costs.

The standard for management and administration (M&A) costs for grants typically is not more than 15% of the grant. Further, by using DFFM staff, wildfires can and often do interrupt HVR activities, which results in reassignment of personnel dedicated to this program. Program administration could be achieved by contracting either with political subdivisions or other appropriate partners performing similar work at a potentially lower cost. Outsourcing HVR program administration would also likely provide an added benefit of accelerating the rate of HVR activities because these contractors are less likely to be reassigned to active wildfires.
DEMA manages multiple mitigation grants²⁶ to include the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM), and Flood Mitigation Assistance (FMA). Hazard mitigation is the phase of emergency management dedicated explicitly to breaking the cycle of damage, reconstruction, and repeated damage. The four phases of emergency management are Preparedness, Response, Recovery, and Mitigation. Wildfire mitigation is one of the many eligible mitigation activities that subgrantees can submit for consideration. There is considerable opportunity for collaboration between DEMA and DFFM to leverage grant dollars for wildfire mitigation efforts.