Idaho Department of Lands
Fire Program Review

Prepared for:

Idaho Department of Lands

Prepared by:

WILDLAND FIRE ASSOCIATES

May 2017

Executive Summary

The Idaho Department of Lands contracted with Wildland Fire Associates to evaluate the structure and function of IDL's fire management program, and provide recommendations for maintaining or improving the safety, effectiveness, and fiscal responsibility of that program. IDL requested that recommendations focus on policies, procedures, program structure, staffing, budget allocations and decision-making for wildland fire preparedness, suppression, and prevention. In particular, IDL desired a forward-looking analysis that evaluated future organizational changes required to successfully address population growth and the growing problem of wildland urban interface fires.

Wildland Fire Associates gathered the information used to produce this report by remotely surveying IDL fire management program employees, interviewing key employees, and by evaluating information and data provided by IDL staff, cooperating fire management entities, government officials, neighboring state fire management program staff, and others as necessary.

The key findings and recommendations of this report are as follows:

KEY FINDING:

- **RESPONSE TO CHANGING WILDFIRE CONDITIONS**: *IDL needs to plan and implement changes in fire organization structure, training, staffing, and equipment to respond effectively to predicted increases in wildfire size, intensity, duration and complexity*. Trends in the evolution of fuels, fire behavior, and climate change indicate that the current fire organization will struggle to achieve its initial attack suppression target. The area burned in the next decade is likely to increase, and these fires are likely to burn more rapidly, with greater intensity, and resistance to control. Population increase and the expansion of the wildland urban interface, together with increased potential for larger and faster spreading fires, will impact communities and rural homeowners, causing greater loss of private property and greater threats to public and firefighter safety. IDL will need to reevaluate the number, type, and location of suppression resources, along with program management capability and interagency relationships.

PROGRAM STRENGTHS

The general focus of this report, per direction from IDL, is on identifying opportunities for future program improvements. However, in order to present a balanced view of the IDL fire program, it is important to note program strengths as well as weaknesses. IDL should justly be proud of many fire program elements, and should strive to maintain these centers of excellence into the future.

- Without exception, leadership at the bureau, area and district levels is dedicated, professional, and committed to IDLs mission and to developing solutions to move the organization forward.
- The initial attack organization understands its mission, and is efficient in achieving decisive results. Safety is a paramount consideration and emphasized at the District, Area and Bureau levels.
- The Bureau has made a significant effort to deliver superior training, within program and budget constraints. The engine academy and supervisory academy are great successes and well regarded by all.
- Equipment capabilities and maintenance are well managed. The bureau understands the types of equipment needed to accomplish its mission. The Equipment Committee is an excellent example of the field and Fire Management Bureau working together to identify equipment issues and resolve them in a timely manner.
- The Coeur d'Alene cache is an exemplary operation that is held in high regard by IDL staff and by federal and state cooperators alike. Field users and dispatchers appreciate the level of service and products that the cache provides for them. Cache staff has a wealth of experience and knowledge at all levels of cache operations.
- IDL employees in positions of aviation leadership, and in the Helicopter Module, are capable and professional. The helicopter aircraft are correctly configured for initial attack and incident support operations. The crew demonstrated a thorough knowledge of their mission and how to support the field.

SHORT-TERM RECOMMENDATIONS

- **PROGRAM AND BUDGET ANALYSIS**: IDL should continue to use the Idaho Fire Management Analysis System (IFMAS) to help identify the most efficient program for allocating funds from the existing baseline budget. This will help ensure that the IDL fire program uses available funds to optimize the appropriate type, and mix of firefighters, engines and aviation assets. The Fire Wardens Group should ground-truth these baseline budget allocation decisions to evaluate whether they make sense on the ground. The difference between IFMAS results (MEL) and the existing baseline budget should be used to define future budget enhancement requests.
- **REPRESENTATION ON INTERAGENCY GROUPS**: IDL should seek to establish consistent representation on MAC Groups, GACCs, and Coordinating Group functional committees. Representatives need to have adequate experience and the authority to speak for IDL on matters of financial commitment and agency policy, as well as incident and resource prioritization
- **CONVERSION OF "1385" POSITIONS**: Based upon interviews, high turnover and difficulty hiring '1385' designated Mechanic shop positions is

preventing the shop from being able to meet production expectations. Converting these mechanic positions to permanent, full-time positions would help with retention of these employees, and enable the shop to meet the equipment needs of the RFPA program. The Fire Bureau Prevention Specialist position should be converted to a full-time position. Adjacent states, such as Montana, Oregon, and Washington, have multiple full-time fire prevention positions.

LONG-TERM RECOMMENDATIONS

- **UPGRADE PRESUPPRESSION STAFFING**: Reconfigure the two existing Booster Crews to create a 20-person Type 2 Initial Attack Crew. Upgrade Resource Boss positions from "1385" positions to permanent full-time. Hire a Deputy Fire Bureau Chief. The Type 2 Initial Attack crew aligns with IDLs successional plan to develop firefighters and increase the capacity of the Type 3 Teams. Additionally, this crew would provide an excellent training platform to enhance qualifications and build depth in the IDL fire organization. These enhancements will cost an estimated $826,000.
- **ESTABLISH APPROPRIATE HAZARD FUELS CAPABILITY TO PROTECT THE WUI**: IDL should establish a statewide prescribed fire/fuels specialist to develop the IDL fuels program beyond site-specific activity fuels and WUI hazard reduction projects, to a scale which improves forest resiliency to wildfire and reduces wildfire risk more broadly. This position will cost approximately $75,000. The Community Fire Program Manager position should be moved to the Fire Bureau where it can better facilitate the coordination of the planning, execution, and monitoring of hazard fuel reduction projects with IDL fire staff.
- **BUILD DEPTH IN SUPPRESSION QUALIFICATIONS MORE QUICKLY**: IDL should develop a plan to create more opportunities for increasing individual fire qualifications. Currently, it takes too long to complete the steps required to move to higher qualified positions in the ICS. Shortening this time will build more depth in the IDL fire suppression organization, and reduce its reliance on external cooperators for qualified suppression leadership. This applies to all levels of the fire organization, from Command and General Staff to the Prevention and Investigation levels.
- **IMPROVE INTERNAL COMMUNICATIONS**: Interviews at both the field and bureau levels indicated support for existing internal agency committees, and for opportunities to expand these communication conduits. Improving communication between field units and the Fire Bureau administration will strengthen organizational cohesiveness and facilitate the dissemination of policy and critical information.

These recommendations are developed further throughout this report, and additional recommendations are listed in Chapter 13.

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Acronyms

BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BDC	Boise Dispatch Center
BOD	Board of Directors
CAR	Community At Risk
CDC	Coeur d'Alene Dispatch Center
CDK	Coeur d'Alene Cache
CIC	Central Idaho Interagency Fire Center
CPTPA	Clearwater-Potlatch Timber Protective Association
CWPP	Community Wildfire Protection Plan
DLA	Defense Logistics Agency
EIIFC	Eastern Idaho Interagency Fire Center
FEPP	Federal Excess Property Program
FFP	Fire Fighter Program
FMH	Fire Management Handbook
FRCC	Fire Regime Condition Class
FSO	Fire Service Organization
GACC	Geographic Area Coordinating Group
GSA	General Services Administration
GVC	Grangeville Dispatch Center
HOS	Helicopter Operations Specialist
ICBS-R	Interagency Cache Business System Re-engineering
IDL	Idaho Department of Lands

MAC	Multi Agency Command
MBF	Million Board Feet
MOU	Memorandum of Understanding
MRCG	Multi Region Coordinating Group
PAC	Payette Dispatch Center
RFPA	Rangeland Fire Protective Association
SAM	State Aviation Manager
SCIIDC	South Central Idaho Interagency Dispatch Center
SEAT	Single Engine Air Tanker
SITPA	Southern Idaho Timber Protective Association
TPA	Timber Protective Association
UAS	Unmanned Aerial Systems
USFS	U. S. Forest Service
WERF	Wildfire Equipment Replacement Fund
WUI	Wildland Urban Interface

Helitak crew, 2014. Photo courtesy of IDL.

Chapter 1 History of Idaho Department of lands (IDL) Fire Management Program

Statutory Responsibility

IDLs statutory responsibility for the fire program is described in Title 38, Idaho Code Chapters 1 and 4, also known as the Idaho Forestry Act and Fire Hazard Reduction Law[1]. Under current Idaho Law:

Every owner of forest lands in the state shall furnish or provide therefore, throughout the closed season, protection against the starting, existence or spread of fires thereon...
(Idaho Code 38-111)

Under IC 38-111, each forest landowner has the option to provide adequate fire protection individually or join other landowners to provide protection as a member of a Timber Protective Association (TPA). For landowners that choose neither option, state law directs Idaho Department of Lands (IDL) to provide fire protection and assess the landowner for the service. State law also requires the Director of IDL to:

"...divide the state into districts to be known and designated as forest protective districts, having due regard in establishing the boundaries thereof, to the adequate, effective and economical protection of forest and range lands therein." (Idaho Code 38-110)

These statutes form the basis of the current IDL Forest Fire Protection Districts (Figure 1) and the two TPAs: Clearwater-Potlatch TPA (CPTPA) and Southern Idaho TPA (SITPA). In recent history no forest landowners, other than the federal government, have met the legal requirements for providing their own fire protection other than by joining a TPA.

[1] Additional administrative rules that provide direction to the fire program are found in IDAPA 20.04.01 and 20.04.02.

Additionally, for state lands, the law states:

> *"The provisions of this chapter shall be applicable to the forest and range lands belonging to the state with the same force and effect as they apply to privately owned forest and range lands within the state; except that for the protection of state-owned range lands, the state board of land commissioners may enter into agreements or otherwise provide for a reasonable arrangement assuring the timely suppression of fires on or threatening state owned range lands whether or not said lands are adjacent to or intermingled with forest lands." (Idaho Code 38-105)*

Funding for the suppression of fires on state range lands is provided for in law:

> *"The state board of land commissioners may authorize the issuance of deficiency warrants for the purpose of paying the costs of fire suppression on state-owned range lands whether or not said lands are adjacent to or intermingled with forest lands. When so authorized, the state controller shall draw deficiency warrants against the general fund." (Idaho Code 38-131A)*

IDL has protection responsibility on all state-owned land and all private forest lands that are not part of a TPA. IDL also has protection responsibility through agreement for federal land involved in offset protection agreements (further discussed in the following section), and in paid protection for one of the tribes.

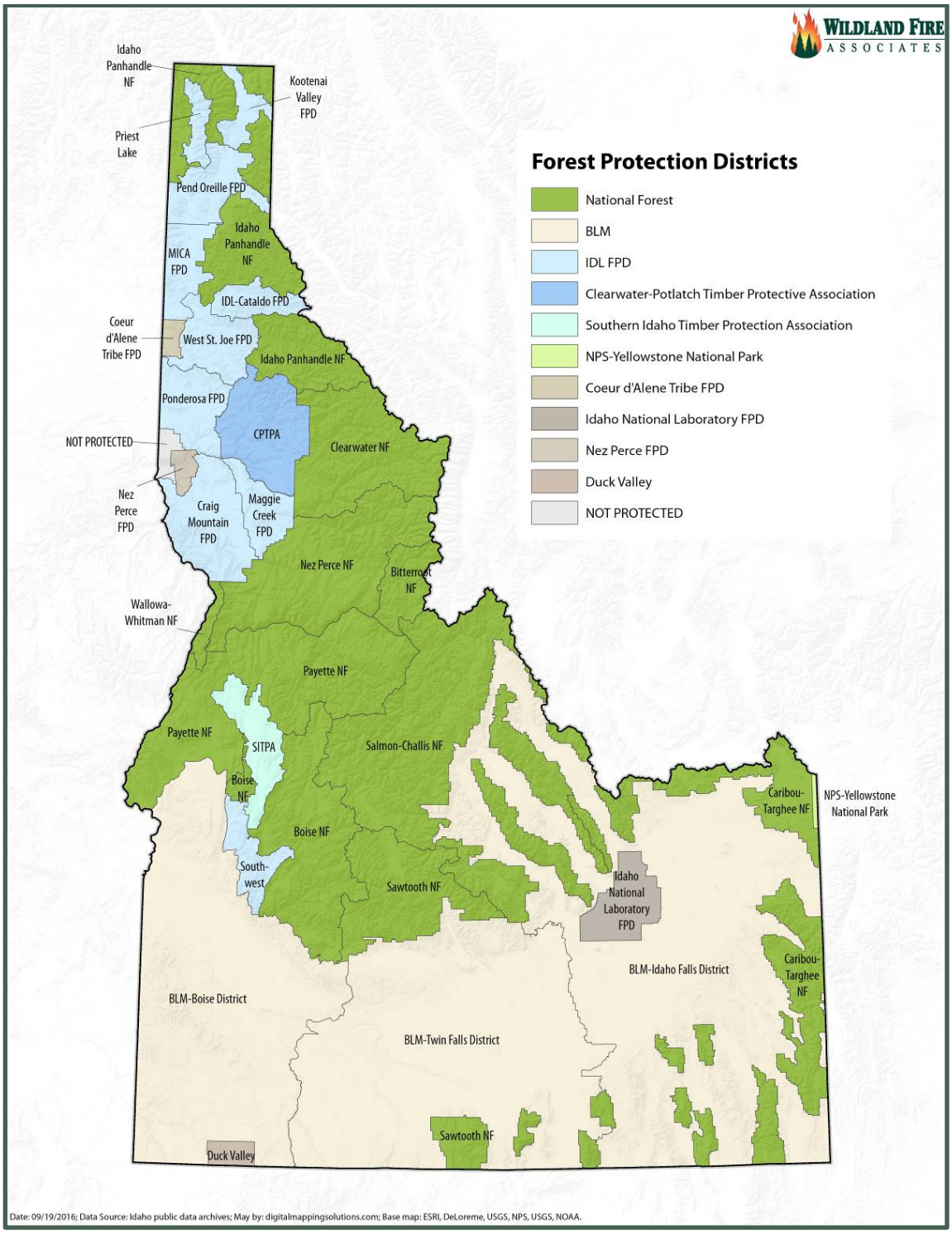

Figure 1 Forest Protection Districts

History and Establishment of IDL Fire Program

Idaho Endowment Lands

Two early federal acts, the Land Ordinance of 1785 and the Northwest Ordinance of 1787, granted federal lands to new states and set aside a portion of those lands to be used to fund public schools. Idaho was granted statehood on July 3, 1890 by a federal act of the 51st Congress, Session 1, Chapter 656. This legislation granted Idaho Endowment Trust Lands of sections 16 and 36 in each township for the support of common schools, and two entire townships (36 sections each) reserved for the use of a university.

The Idaho Constitution was crafted to include Article IX, Section 8, which mandates that the lands will be managed "…in such manner as will secure the maximum long-term financial return to the institution to which [it is] granted." Management of endowment trust lands is entrusted to the State Board of Land Commissioners (Land Board). The Idaho Department of Lands is the administrative arm of the Land Board and carries out the executive directives of the Land Board to meet the constitutional trust mandate. The State Board of Land Commissioners comprises Idaho's Governor, Secretary of State, Attorney General, Superintendent of Public Instruction, and State Controller.

The endowment lands are managed by IDL for the benefit of the following:

- Public School,
- Agriculture College,
- Charitable Institutions,
- Normal School,
- Penitentiary,
- School of Science,
- State Hospital South,
- University, and
- Capitol.[2]

[2] 2015 Idaho Department of Lands Annual Report

The Endowment Trust Lands comprise approximately 2.44 million acres across the state, with approximately 972,543 acres of forest land located primarily north of the Salmon River watershed in northern Idaho.

The Idaho Idea

In 1909, the North Idaho Forestry Association hosted a meeting of lumbermen from Idaho, Montana, Oregon and Washington. The outcome of the meeting produced the Western Forestry and Conservation Association. Their first forest protection and conservation policy statement was based upon common experience. "The statement recommended (1) compulsory disposal of logging slash in such a way that both protection and forest reproduction would be best guaranteed; (2) aid, encouragement, and support of any cutover lands as a permanent State Forestry Reserve; and (3) 'that in each State the three agencies now concerned in forest fire protection ... meet jointly previous to the opening of such dangerous season, and that they formulate a scheme of cooperation ... so that the entire area of the State may be thoroughly covered, and with less duplication of effort."

"This type of cooperation was so novel in the industry, and so effective in fire control, that it became known as 'the Idaho idea." It gained force rapidly as other organizations were formed. And when the Federal Government, through the Weeks Law, became an active participant in fighting the fires, the organization of protection throughout the country was shaped by it."

California and British Columbia subsequently joined the Western Forestry and Conservation Association, and the Association has become influential in promoting forest stewardship in the Western United States.

Source: Forests and Forestry in the American States: A Reference Anthology Compiled by the National Association of State Foresters. Ralph R. Widner, Editor. 1967. Pages 256-257.

History of the Fire Program

After Idaho received statehood in 1890, timber harvesting increased to meet demands of the mining, railroad, and agricultural industries. The Idaho Legislature acknowledged concerns of timber operators in 1905 and mandated that open fires in the forest be controlled. Legislators also authorized the State Land Commissioner to arrest people who violated this requirement and deliver them to the sheriff for prosecution.[3]

As forested lands increased in value, property owners began to organize to provide wildfire protection. These wildfire protection organizations were the predecessors of the current TPAs, and they established the concept of

[3] *Managing Fires on Lands Protected by the State of Idaho: A Handbook for Policy Makers, Landowners and Idaho Citizens.* A Publication of Idaho Department of Lands. December 2008. p. 1.

cooperation for fire detection and suppression between timber owners and government agencies, both state and federal. In 1905, the Idaho legislature passed laws mandating suppression and control of open fires in the forest.

The 1910 fires in northern Idaho and western Montana, known as the Big Blowup or the Big Burn, consumed over 3 million acres, killing 85 people and devastating several small communities including Wallace, Idaho. The Big Blowup significantly influenced the approach to fire protection in Idaho and across the west. Federal legislation, including the Weeks Act of 1911 and the Clarke-McNary Act of 1924, directed better cooperation between federal and state agencies, and provided authority for federal assistance to states in the form of financial, and eventually personnel, support.

The 1925 "Idaho Forestry Law…was enacted creating a cooperative Board of Forestry, and agency to be advisory to the Land Board and authorizing a State Forester and a staff to carry on the state's forestry activities."[4] Additionally, in 1925 the Idaho Legislature strengthened the state's wildland fire law to require that forest landowners provide "adequate and efficient" fire protection that met the approval of the State Forester.[5] This law also required private landowners to be billed for the cost of state-provided fire protection if they failed to meet the required fire protection standard. Given this legislative direction, IDL began to expand the fire protection program to cover Endowment Trust Lands and private forest lands that were not covered by a TPA. Forest Protection Districts were established in forested areas, and a Fire Warden with additional staff were added to each District.

Fire Program Growth and Development Trends

The 1960's

The 1960's were a time of change for several aspects of the fire program. In 1964, the federal General Accounting Office determined that states and federal agencies should enter into agreements for cost reimbursement for wildfires to achieve more equitable outcomes. This was a significant change because, prior to 1964, state and federal agencies fought fire on each other's jurisdiction without reimbursement. A 1966 fire in the Garden Valley area burned more than 17,000 acres, and resulted in the first request to the state of Idaho from federal agencies for reimbursement of $1 million. The Idaho legislature disapproved of the reciprocal agreement and did not appropriate funds for reimbursement for the fire.

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[4] *Forests and Forestry in the American States: A Reference Anthology Compiled by the National Association of State Foresters.* Ralph R. Widner, Editor. 1967. p. 262.

[5] *Managing Fires on Lands Protected by the State of Idaho: A Handbook for Policy Makers, Landowners and Idaho Citizens.* A Publication of Idaho Department of Lands. December 2008. p. 2.

In 1966 and 1967 several large and destructive fires occurred, including Huston Ranch, Sundance, and Trapper Peak. The fires that burned during these seasons were extremely difficult to control, burned for weeks, and greatly exceeded the firefighting capabilities of IDL and TPA forces. Federal firefighting resources delivered needed assistance on several of these fires, including fire crews, aircraft, and logistical support.

The costs of fighting the large fires quickly exceeded available firefighting funds. The Governor of Idaho sought additional sources of funding and asked the State Attorney General to rule on how the state could pay for the firefighting costs. The State Attorney General ruled in September of 1967 that Idaho law allowed deficit spending for firefighting; and specifically that the Land Board is authorized to issue deficiency warrants to pay for firefighting costs. In mid-September of 1967, the Idaho Land Board issued $1.4 million in deficiency warrants to cover the costs of fighting wildfires.

The severity of these fire seasons exposed issues related to field-level concerns about the adequacy of firefighter training and quality of equipment. Additionally, program-level concerns about the ability of the state to pay the cost of wildland fire suppression during severe fire seasons resulted in the Idaho Legislature making changes to Idaho Code in 1968 and 1972 that included:

- recognizing that resources other than timber should share the burden of fire suppression costs;
- assessing a forest landowner fee per acre for state-provided fire protection and limiting their potential liability to the assessment amount (Table 1);
- appropriating general tax revenue to cover fire suppression costs that exceeded the assessment funds;
- confirming the state as the primary protection entity;
- enabling the State Forester to enter into agreements with federal agencies to provide cooperative fire response; and
- providing funds to improve training for state firefighters and upgrade firefighting equipment.

The cost of the fire protection assessment to landowners has increased over time as shown in Table 1. A residential surcharge of $10.00 for each improved lot or parcel was added in 1993, but the fundamental structure of the law remains

unchanged. The state pays the assessment rate for the Endowment Trust Lands using the Earnings Reserve Account[6].

Table 1: Landowner Assessments from 1981-2009

Year:	Rate per Acre:	Minimum Parcel Rate	Improved parcel rate:
2009	$0.60	$15.00	$40.00
2008	$0.60	$15.00	$20.00
2006	$0.55	13.75	$20.00
1993	$0.45	$11.25	$10.00
1987	$0.35	$8.75	None
1981	$0.30	$7.50	None
1976	$0.20	$5.00	None
1968	$0.18/acre in North Idaho, $0.10/acre in South Idaho	None	None

The 1970's through the 1980's

Two IDL employees were killed on the Harris Ridge fire near Kooskia, Idaho in August of 1972. The resulting investigation report:

- Identified training deficiencies for IDL employees, cooperators and private citizens;
- Emphasized the need for a clear, strong line organization within IDL; and
- Recommended implementation of a personnel development program, which focuses on accountability.

In 1983, based on a recommendation from an Idaho legislative committee, IDL worked with federal agencies to modify the existing cooperative fire agreement to help stabilize protection funding. The effort resulted in redrawing jurisdictional response boundaries in a way that balanced the cost of fire protection to reduce or eliminate the need for agencies to bill one another for protection costs. This agreement is still in place, and is referred to as *offset protection.* However, when a neighboring agency receives a request for assistance, the costs are now reimbursable.

Funding for fire crews and equipment was moved from slash disposal funds to dedicated fire program funds in 1987. A dedicated fund was established by the

[6] Idaho Code 38-114

legislature, and landowner assessments are deposited in the fund. Staffing remained fairly static[7].

The 1990's through the 2000's

The legislature recognized the potential for increased costs of fire protection for 'improved parcels' and added a surcharge to assessments in 1993 based on legislative direction:

> *"…the state board of land commissioners shall establish a surcharge to be levied and assessed in an amount not to exceed ten dollars ($10.00) for each improved lot or parcel to offset costs associated with wildfire preparedness." (Idaho Code 38-111 in 1993 dollars)*

In 1996, IDL joined the Idaho Panhandle National Forest to open an interagency dispatch center in Coeur d'Alene, which was IDLs first interagency dispatch partnership. IDL was an active partner in the formation of interagency dispatch centers that were added in Grangeville, McCall, and Boise.

The 2000 fire season affected not only the state of Idaho, but also fire management nationally. The severity of the season, combined with overall cost, resulted in the recognition that changes needed to be made to maximize fire response, reduce impacts of fire to rural communities, and ensure that there were enough firefighting resources available in the future. The National Fire Plan (NFP) was the result, and it was developed in conjunction with federal, state, county, and local governments, and tribal representatives. The NFP, which continues to guide fire planning, focuses on five areas:

1. Firefighting - assuring that necessary firefighting resources and personnel are available to respond to wildland fires that threaten lives and property.
2. Rehabilitation and Restoration - conducting emergency stabilization and rehabilitation activities on landscapes and communities affected by wildland fire.
3. Hazardous Fuel Reduction - reducing hazardous fuels (dry brush and trees that have accumulated and increase the likelihood of unusually large fires) in the country's forests and rangelands.

[7] Based upon a conversation with Brian Shiplett, Chief IDL Bureau of Fire Management, Retired.

4. Rural and Community Assistance - providing assistance to communities that have been or may be threatened by wildland fire.
5. Accountability - committing to the Wildland Fire Leadership Council, an interagency team created to set and maintain high standards for wildland fire management on public lands.

In addition to the NFP, the US Congress passed the Disaster Mitigation Act in 2000, which required each state to create a Federal Emergency Management Agency (FEMA) approved state hazard mitigation plan. The act also required communities to have a local hazard mitigation plan to be eligible for emergency funding in the event of a federally declared disaster.

The *Idaho Statewide Implementation Strategy for the National Fire Plan* was developed in response to the NFP and the Disaster Mitigation Act. Adopted in 2002, the strategy created a partnership between the state and the counties through:

1. Establishing the Idaho State Fire Plan Working Group to facilitate implementation of the NFP. The group consists of state and federal agencies, counties, the Idaho Fire Chiefs Association, and the Nez Perce and Coeur d'Alene tribes.
2. Emphasizing collaborative fire protection planning between the state and counties.
3. Calling for the creation of County Wildfire Protection Plans (CWPP), which are intended to be local hazard mitigation plans that allow for identification of hazards and prioritization of treatments to reduce hazards. Federal agencies must consider CWPP prioritization when developing fire management plans and planning hazard fuel treatments.
4. Creating county-wide collaborative groups of wildfire agencies, fire departments, emergency managers, and other interested parties to be responsible for updating and implementing the CWPPs.

IDL contracted an independent review of its fire management program in 2004. The final report, *Fire Protection Program Review: A Report to the Director*, detailed a comprehensive examination of the fire program. The review yielded ten recommended priorities and many helpful observations, all of which were developed to increase the overall efficiency and safety of the fire program, as well as help IDL identify future planning and staffing needs. Table 2 outlines the

recommended priorities and what IDL has accomplished in response to the recommendations.

Table 2: Implementation of 2004 Fire Program Review Recommendations

	Recommendations[8]	IDL Implementation Response
1	Engine, Crew and Helitack Boss Positions – These positions are so important to safe and efficient firefighting operations they need to be upgraded to permanent status.	None of these positions have been upgraded to permanent status. A Helicopter Operations Specialist is a new position that was added in 2016 and is .83 FTE with permanent status.
2	Helicopter Upgrades – The two light helicopters need to be upgraded to Type II and the crew complement increased. These upgrades would increase IDL's initial attack capabilities by a significant factor.	CDA helicopter was upgraded by 2005 and the Craigmont/Grangeville helicopter was upgraded in 2016.
3	Training Officer – IDL needs to have a full-time training officer on staff who can provide hands-on training to IDL staff and local fire departments.	IDL created a full time Training Officer in the Fire Bureau in 2010.
4	Fire Wardens – Each area needs to have a dedicated fire warden. IDL can no longer have its Area Supervisors wear both hats.	By 2007 each Area had a dedicated Fire Warden
5	Engine Compliment Review – IDL needs to evaluate the number of engines it has in its inventory and trim it to a reasonable number. You also need to develop a specification for the new IDL engine that includes four-wheel drive, heavy-duty chassis, and an upgraded pumping capacity.	Reviewing IDL engine fleet has been an ongoing process since the Teie Report. The inventory has been significantly reduced from what there was in 2004. All of IDL's Engines meet or exceed NWCG Standards for the Engine Typing. All engines are replaced on a rigorous schedule to keep the fleet upgraded and ensure good operational condition. The WERF fund was created.
6	Firefighters – IDL should move toward staffing all of its first line	This was done in 2005 through 2006.

[8] *Idaho Department of Lands, Fire Protection Program Review: A Report to the Director,* December 2004.

	Recommendations[8]	IDL Implementation Response
	engines with three firefighters. There is also a need to increase the period of time they are available each year.	
7	Safety Officer – IDL needs a full-time safety officer who can ensure that its field operations, both fire and forestry, are conducted in a safe manner. This position will also be able to assist in training.	IDL hired a full time Safety Officer in 2016.
8	Air Operations Specialist – IDL needs to have an air ops specialist in the operations section of the Fire Bureau. This position could also function as the northern air tactics group supervisor, used to coordinate air operations in the northern air space.	IDL added a Helicopter Operations Specialist in 2016. The ATGS portion of this recommendation has not been achieved.
9	Coordination Centers – IDL needs to provide staffing at the proposed inter-agency coordination center in Grangeville and upgrade the seasonal position at the Boise Inter-Agency Logistics Center. There needs to be a person(s) in each of the centers who can represent IDL's interests.	This was done at Grangeville, 2006. It has not been done at Boise, however SW Area Duty Officer SOP's dictate that the "Duty Officer maintains a presence at BDC to provide tactical and logistical input during I.A. and extended attack, establish priorities and allocate critical resources in coordination with other agency D.O. and dispatchers using closes forces concept.
10	Fire Prevention – IDL needs a more aggressive fire prevention program. A position is needed to be the program manager. This person could also be involved in cause determination, and cost collection.	The program manager with Fire Prevention/Fire Investigation responsibilities also has responsibility for the Aviation Program

In 2009, the Legislature established a Wildfire Equipment Replacement Fund (WERF) for the replacement of capital wildfire equipment.[9] This fund is used by

[9] Idaho Code 38-111

IDL for replacement of all capital fire equipment including fire engines, trucks, pumps, and radio equipment.

> *"The department of lands shall determine reimbursement rates for all capital fire equipment used for activities other than fire preparedness. Reimbursement revenues shall be deposited in the wildfire equipment replacement fund. Additional moneys may be deposited into the wildfire equipment replacement fund from any other source." (Idaho Code 38-111)*

The 2015 fire season was record-breaking for IDL, being the costliest fire season on record. On IDL protection, over 75 homes and 220 additional structures were burned, and a total of 27 Incident Management Teams (IMT) were used in fire suppression operations. In comparison, during an average fire season IDL uses an average of three IMTs. The total suppression cost for 2015 was approximately $64 million, significantly more than the previous most expensive season of 2007 when $24 million[10] was spent on fire suppression.

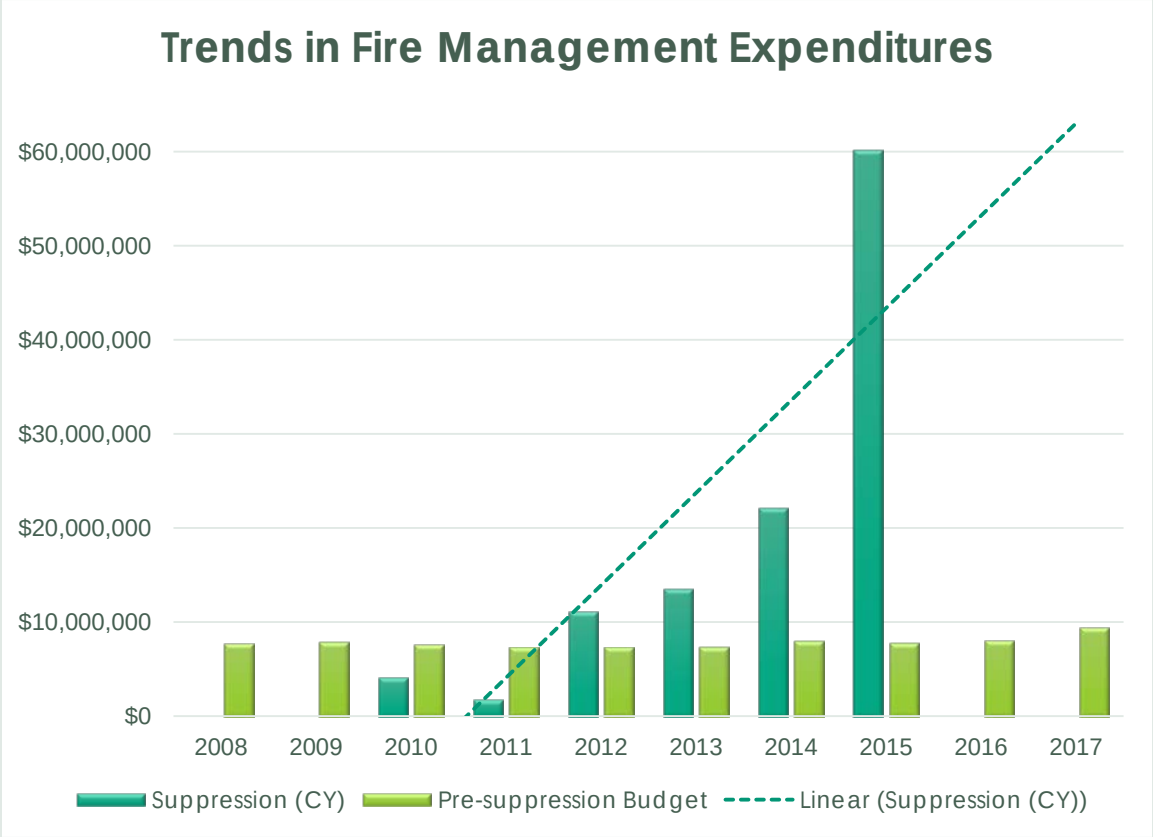
In response to the 2015 fire season, the Idaho legislature approved the addition of $917,000 to the IDL fire budget. A one-time allocation of $150,000 was given to IDL for a fire program review, which will be complete in 2017. The remaining $767,000 is an on-going increase. This increase has allowed IDL to add needed fire positions, increase the length of some seasonal positions, and provide salary increases to some seasonal positions that had not had a pay increase in six years.

Trends in Fire Management Expenditures

Overall fire management funding for fire preparedness (funding received directly from the legislature each year) has remained relatively static from 2008 through 2015. The legislature provided a significant increase after the 2015 fire season (Figure 2). Suppression costs have continued to rise, with 2015 being an anomalous fire season. Trend lines can be used to support the assumption that suppression costs will continue to increase in the future, with occasional years like 2015 where total expenditures will be significantly higher. Fire prevention budgets and expenditures are discussed in Chapter 4.

[10] dollars adjusted for inflation

Figure 2 Trends in Fire Management Expenditures[11]



Changes in funding sources for fire preparedness have occurred over the past two decades. Figure 3 shows the sources for preparedness funding for 1999 through 2008. Figure 4 shows the funding sources for 2007 to 2016. The most significant change is a decrease in overall funding from the general fund and an overall increase in funding received from residential surcharges. Although there have been shifts in amounts contributed from other sources such as state lands, federal funds and forest landowners, they are not significant.

[11] data provided by IDL

Figure 3: Preparedness Expenditure Distribution from 1999 to 2008[12]

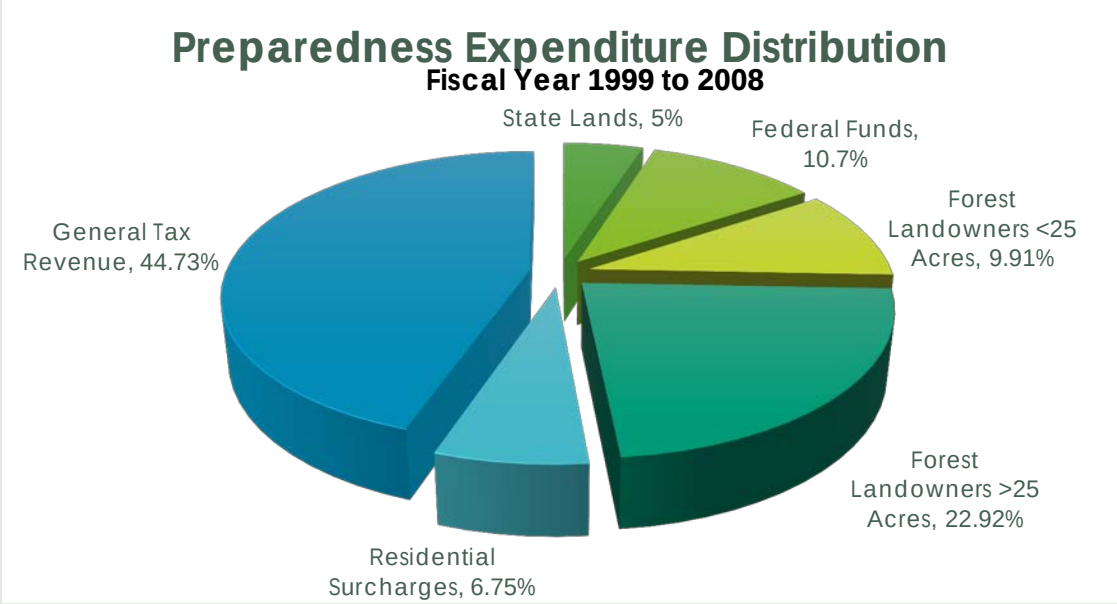
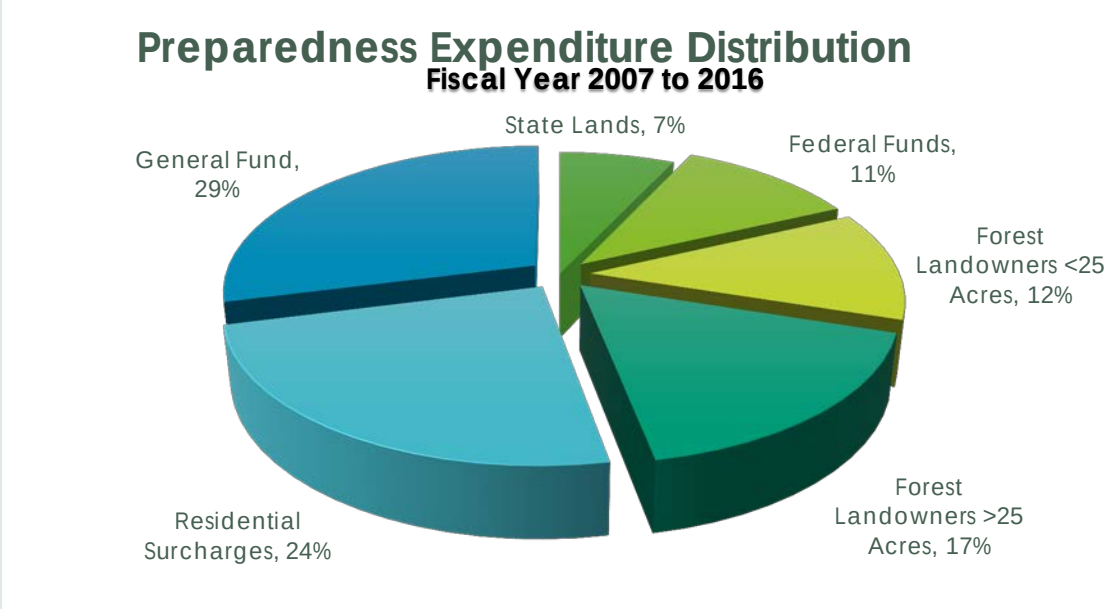


Figure 4: Preparedness Expenditure Distribution from 2007 to 2016[13]



Discussions about future trends in fire management expenditures for prevention, preparedness, and suppression are located in Chapters 4 through 6.

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[12] *Managing Fire on Lands Protected by the State of Idaho: A Handbook for Policy Makers, Landowners and Idaho Citizens.* December 2008.

[13] *Managing Fire on Lands Protected by the State of Idaho: A Handbook for Policy Makers, Landowners and Idaho Citizens.* December 2016.

Chapter 2 Fire History and Fuels

Fire Regimes and Condition Classes, Changes and Predicted Trends

Four types of information are commonly used to understand changes in fire history and fuels over time. They are fire regime, vegetation condition class difference, fuel model difference, and existing vegetation difference. The following discussion will define these types, and evaluate them in terms of their impact upon IDLs fire management program. The following information comes from Interagency Fire Regime Condition Class (FRCC) Guidebook, Version 3.0, September 2010.

Fire Regime is a general classification of the role fire would play across a landscape in the absence of modern human intervention, but including the possible influence of aboriginal fire use[14]. The five natural fire regime groups are classified based on the average number of years between fires (fire frequency or mean fire interval [MFI]) combined with characteristic fire severity reflecting percent replacement of dominant overstory vegetation.

These five natural fire regimes are defined as follows:

TABLE 3: Fire Regimes

Group	Frequency	Severity	Severity Description
1	0-35 years	Low/Mixed	Generally low severity fires replacing less than 25% of the dominant overstory vegetation. Can include mixed- severity fires than replace up to 75% of the overstory
2	0-35 years	Replacement	High-severity fires replacing greater than 75% of the dominant overstory vegetation
3	35-200 years	Mixed/Low	Generally mixed-severity; can also include low severity fires
4	35-200 years	Replacement	High-severity fires
5	200+ years	Replacement/Any Severity	Generally replacement severity; can include any severity type in this frequency range

Vegetation Condition Class Difference uses condition class to determine the degree of departure from historical, or reference, conditions of vegetation and fuels regimes. Fire Regime Condition Class is defined as follows:

[14] Interagency Fire Regime Condition Class (FRCC) Guidebook, Version 3.0, September 2010

- FRCC 1 represents ecosystems with low (<33 percent) departure from a defined reference period – that is, landscapes still within the natural or historical range of variation;
- FRCC 2 indicates ecosystems with moderate (33 to 66 percent) departure; and
- FRCC 3 indicates ecosystems with high (66percent) departure from reference conditions.[15]

Fuel Model Difference uses fuel models for fire behavior modeling. Each model represents similar types of fuels and vegetation, which affect rate of spread, flame length, and other characteristics of fire.

Existing Vegetation Difference uses vegetation differences represented by changes in cover and acreages.

Fire Regimes and Condition Class

Condition Classes

Change in condition class from lower to higher values generally indicates an increasing departure from reference conditions. In forest types, higher values may indicate that wildfire suppression has disrupted the natural fire cycle resulting in increasing forest density and fuel buildup. This shift can result in fires that are increasingly intense, especially in forest types which originally had relatively frequent, low to moderate intensity fires prior to the onset of fire suppression. Conversely, condition class values may become lower as fires reoccur and forest management practices result in the reestablishment of vegetation characteristics closer to reference conditions.

Condition class may be less relevant as an indicator of increasing or decreasing wildfire problem in timber harvesting areas than it is for natural wildlands. Timber management areas do not reflect the natural buildup of fuels over time due to fire suppression activities and the disruption of natural fire regimes. However, the general changes for Idaho described below do impact adjacent IDL and TPA lands because they result in larger and more intense wildfires burning from non-IDL lands into IDL protected lands.

Figure 5 demonstrates that throughout Idaho between 2001 and 2012, there has been:

- no change in condition class on 32.7 million acres,
- a change in condition class to a lower value on 15.4 million acres, and

[15] From Interagency Fire Regime Condition Class (FRCC) Guidebook, Version 3.0, September 2010

- a change in condition class to a higher value on 5.2 million acres.

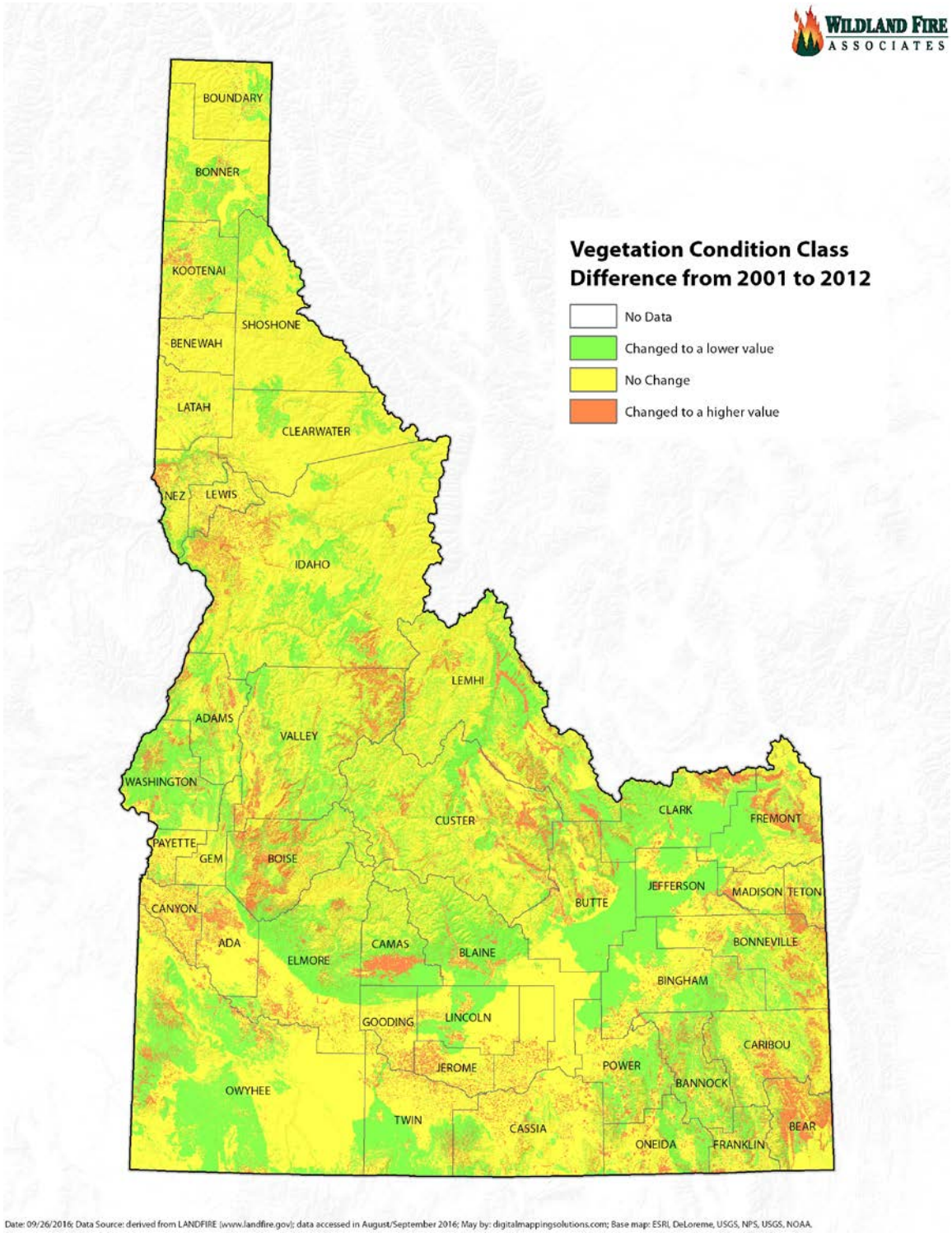


Figure 5 Relative change in Vegetation Condition Class (or VCC, formerly FRCC) from 2001 to 2012

As shown in Figure 5, the changes are spread throughout Idaho. There is more change to higher values in the southern part of the state, likely reflecting shorter natural fire return intervals in the grass and shrub vegetation types. The forested vegetation types in the northern part of Idaho have longer natural fire return intervals. Forested areas that display an increase in condition class value are at higher risk for intense wildfire, posing an increased threat to nearby communities and timber resources.

Fuel Models

Similarly, an increase in fuel model type indicates a change in potential fire behavior. Fuel model categories increase numerically from grass types (Fuel Models 1 through 3) to shrub types (Fuel Models 4 through 7) to forest types (Fuel Models 8 through 13).[16] A decrease in fuel model type may indicate a successional pattern toward grass types, which result in fast moving wildfires. An increase in fuel model type may indicate a shift towards increasing fuel loads, which can result in the potential for more severe fires, with higher resistance to control and increased fire suppression expenditures.

Figure 6 demonstrates that throughout Idaho, between 2001 and 2012, there has been:

- 7.6 million acres that changed to a lower fuel model,
- 42.6 million acres that did not change fuel models, and
- 3.1 million acres that changed to a higher fuel model.

[16] *Aids to Determining Fuel Models for Estimating Fire Behavior.* USDA Forest Service, GTR-INT 122, April 1982.

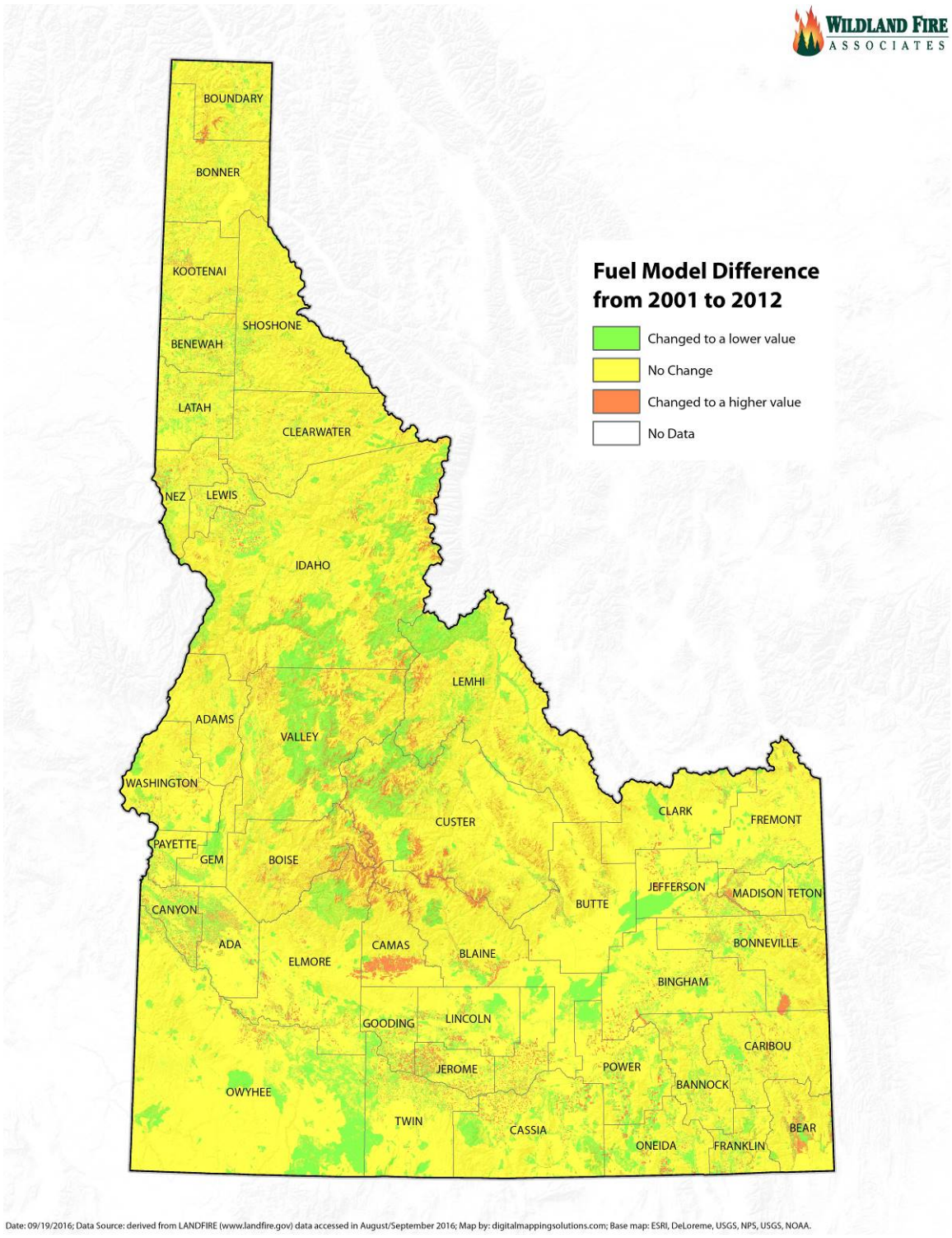


Figure 6: Relative change in fuel model from 2001 to 2012

Changes to lower values are found throughout the state, but especially in Boise, Custer, and Camas Counties, and around the central and southeast part of the state. This may reflect changes in fuel model type due to an increase in invasive grass species, for example.

Existing Vegetation Difference

Changes in existing vegetation values help identify locations in which cover is changing for trees, shrubs, and herbaceous vegetation. Higher values generally indicate an increase in cover, fuel continuity, and amount of fuel. Any given vegetation value can also show increases or decreases in acreage within that vegetation type between reference years.

Figure 6 demonstrates that in Idaho between 2001 and 2012 there has been:

- 5.4 million acres changed to a lower existing vegetation value,
- no change in 38.3 million acres, and
- 9.7 million acres changed to a higher existing vegetation value.

Of note is that herbaceous cover has increased significantly. For example, the herbaceous category characterized by 50-60% cover increased from 379,183 acres in 2001 to 3.1 million acres in 2012.

Several factors may be contributing to this increase, including wildfire activity. As shown in Figure 7, several counties contain vegetation types that have changed to a higher value, especially in a strip running northeast between Owyhee and Fremont counties. In the northern part of the state, the Latah and Lewis County area contains a similar pattern.

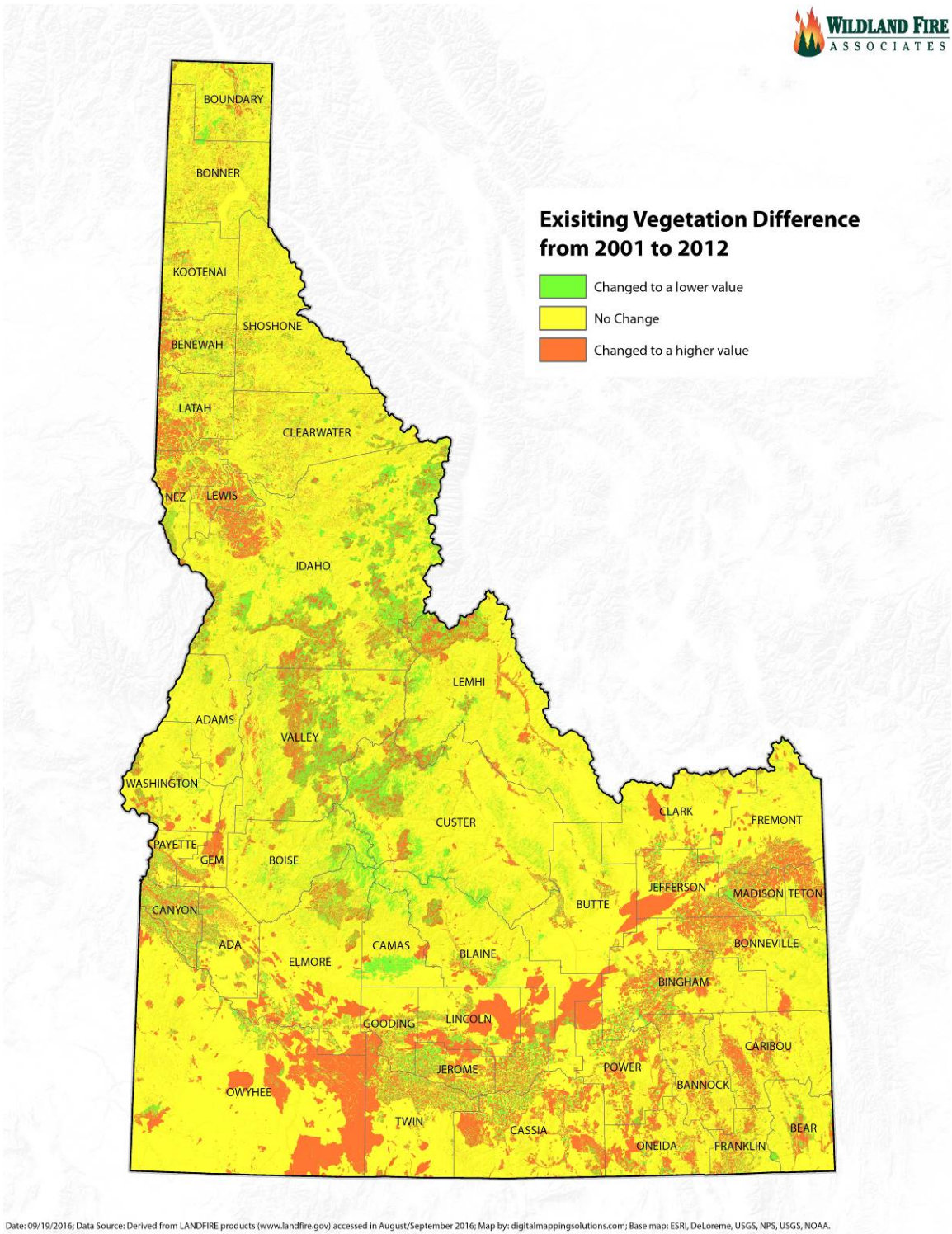


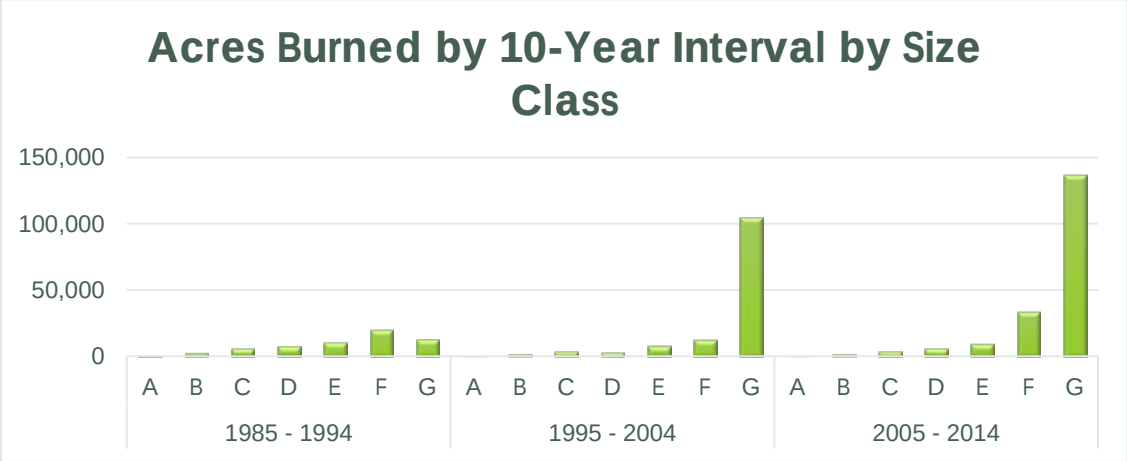
Figure 7 Relative change in existing vegetation from 2001 to 2012

Taken together, the three maps display recent changes in the fuels and vegetation that support the spread of wildfire. As grass, shrub, and forest fuel types change over the Idaho landscape, fire behavior and fire occurrence will

shift. This shift will affect public and firefighter safety, suppression costs, and resource damage. In turn, this shift will also affect the location, type, and amount of suppression resources required to manage the wildfire workload.

Acres burned across the United States have increased over the last several years (Figure 8). Similarly, based upon IDL fire records, there is a clear increase in wildland fire size of over 1,000 acres per decade from 1995 to 2014, while the decadal number of fires, including lightning and human caused, has decreased by approximately 40 percent over the 30-year sample period (Figures 9, 10). Based upon research, direct observation and anecdotal information from professionals fighting fires in Idaho, the decadal decrease in number of fires can be attributed to the long-term climate oscillation over the Pacific Ocean blocking and steering storms away from the western United States. This blocking action modifies the surface temperature, humidity, wind and distribution of clouds. Average temperatures have increased 2.5 degrees F since 1970 in the forested regions of the western U.S. This trend is expected to continue.[17] Most of the fires in this sample period are burning in a frequent, low severity fire regime or a periodic, mixed severity fire regime. Severity maps for recent fires were requested by WFA, but were not available.

Figure 8 Acres Burned by 10-Year Intervals by size class (1985 to 2014)



NWCG Fire Size Classes:

- Class A - one-fourth acre or less;
- Class B - more than one-fourth acre, but less than 10 acres;
- Class C - 10 acres or more, but less than 100 acres;
- Class D - 100 acres or more, but less than 300 acres;
- Class E - 300 acres or more, but less than 1,000 acres;
- Class F - 1,000 acres or more, but less than 5,000 acres;
- Class G - 5,000 acres or more.

[17] Acres Burned in the U.S., 1986-2015, Data from NIFC website.

Conversely, the decadal number of acres burned has increased significantly. Most of the increase has been in forests with a periodic, mixed-severity fire. Fires appear to be burning more rapidly, with greater intensities, an increased resistance to control, and fire season duration is longer. During drought or severe drought conditions, the fires are burning for an extended period of time. This pattern has been repeated over the last two decades, and this trend will likely be repeated in the next decade.

Even though the fire numbers are declining, the number of acres burned in the periodic, mixed severity fire regime will continue to increase resulting in increased resistance to control and requiring a greater number of firefighting resources. Current climate change predictions and decadal trends of burned area by fire regime indicate that within the next decade there may be an increase in the number and area of fires burning in the infrequent, high-severity fire regime.[18,19,20,21] Based upon currently available information and data trends, the number of fires burning in the infrequent, high severity fire regime will increase, and areas of fire disturbance have the potential to become even larger.[22]

Past Fire and Predicted Trends

The decadal trend in acres burned indicates that during the decade of 2015 through 2024, IDL wildland fires may burn approximately 250,000 acres. In 2015, the Clearwater Complex burned in excess of 68,100 acres, so it is possible the projected decadal increase could be exceeded.

Based on current activity and projections and corresponding trends, IDL is struggling and will continue to struggle to meet the standard of keeping 94% of all fires at 10 acres or less. IDLs current structure will require changes to effectively manage these complex, larger and faster growing fires.

The potential for larger and faster spreading fires will impact communities and rural homeowners, causing greater loss of private property. Threats to the safety of the public and firefighters will increase as fires grow larger.

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[18] Westerling, A.L., H.G. Hidalgo, D.R. Cayan, and T.W. Swetnam. 2006. Warming and earlier spring increase in western U.S. forest wildfire activity. *Science* 313(5789):940–943.

[19] Neilson, R., J. Lenihan, R. Drapek, and D. Bachelet. 2004. Forests Fire Risk and Climate Change. Pacific Northwest Research Station-Science Update. Issue 6. January 2004.

[20] Brown, T.J., B.L. Hall, and A.L. Westerling. 2004. The impact of twenty-first century climate change on wildland fire danger in the western United States: an applications perspective. Climatic Change 62:365–388.

[21] Van Mantgem, P., J.Nesmith, M.B. Keifer, E. Knapp, A. L. Flint, and L.E. Flint. 2013. Can Climate Change increase fire severity independent of fire intensity? USDI and USGS Research Article: https://www.fs.fed.us/psw/cirmount/meetings/agu/pdf2013/vanMantgem_talkAGU2013.pdf

[22] Brown, T. J. op.cit.

Figure 9 demonstrates an increase in the overall total acres burned during each decade from 1985 through 2014. However, Figure 10 shows a decrease in the overall number of fires in the same time periods.

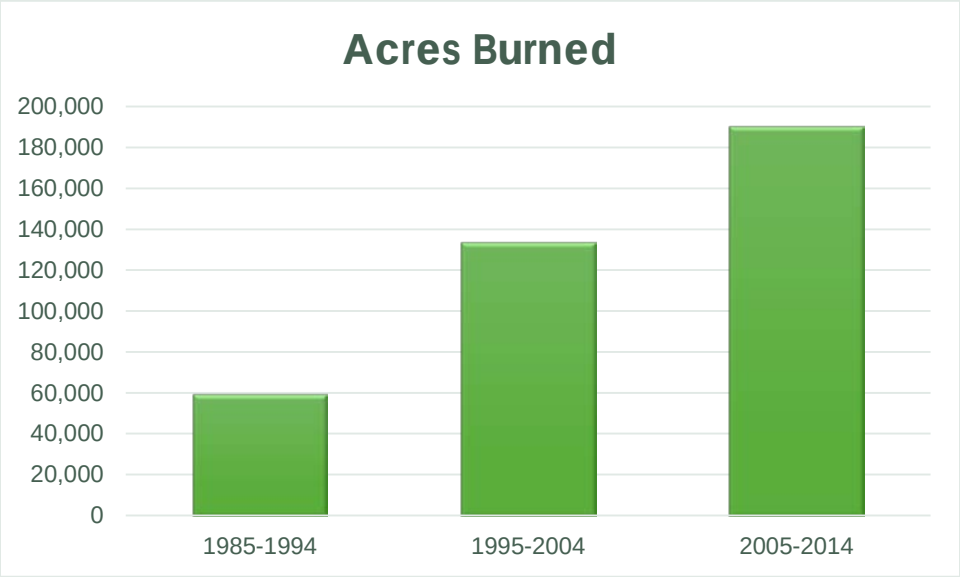

Figure 9 Acres Burned by 10-Year Intervals (1985 to 2014).

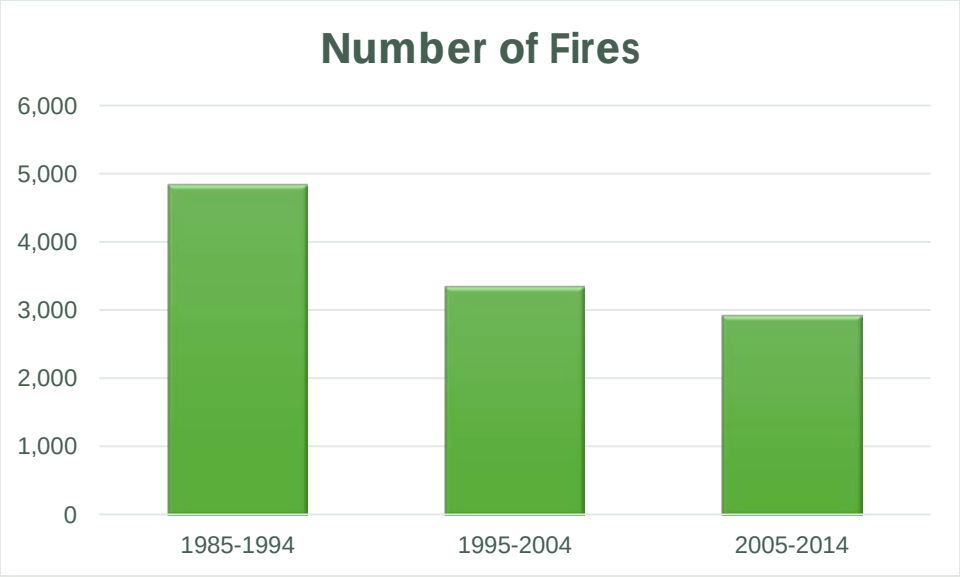

Figure 10 Number of Fires by 10-Year Intervals (1985 to 2014).

To be successful under these challenging circumstances, IDL may need to make changes in fire program training, staffing, and equipment. Because this is not a static situation, additional planning in the areas of training, staffing changes and new equipment required to deal with projected changes in fire behavior and area burned will be required to address how the agency expands and contracts as the situation dictates.

Management of Activity Fuels

The IDL activity fuels program is associated with timber sales on state and private lands, where fuels are removed to mitigate wildfire risk and to prepare and manage the site for reforestation. Such fuels are treated in accordance with standards, procedures, and methods described in the 2014 IDL handbook containing Title 38, Idaho Code chapters 1 (Idaho Forestry Act) and 4 (Fire Hazard Reduction Law), as well as Idaho rules pertaining to Forest Fire Protection and Fire Hazard Reduction.

IDL collects bond monies to ensure compliance with these standards. IDL keeps $0.24/1000bf of the bond, and these funds are split equally between the forest practices and wildfire suppression programs. The warden can also withhold funds for site cleanup from the bond if standards are not met.

The synchronization of new timber sales with the mitigation of fire risk created by activity fuels from previous timber sales appears to be performed very well. Concerns were expressed by IDL staff that future increases in logging activity, leading to greater amounts of activity fuels to treat, may result in an accumulation of fuel hazards if issues such as weather and air quality regulations impede removal of these fuels.

Several comments from IDL employees addressed the lack of the use of prescribed fire as a resource management tool to reduce fuel loads on a broader scale than achieved by pile burning. Reasons cited include a reluctance of foresters to use fire as a management tool because of potential damage to timber marketability. It was commented that while pile burning reduces local fire hazard, it is not as effective as prescribed fire to mitigate the spread of large wildfires, as well as to build landscape resilience to wildfires. Increased resiliency is an important component in the mitigation of wildfire hazard and risk.[23]

Findings and Recommendations

Finding:

- Records for timber sales on state lands are kept at the ten Area offices; they are not compiled into a statewide GIS layer. IDL staff stated that this product is expected in the future when IDL fully implements the Lands Information System (LIMS). Similarly, records for the sales on private lands are kept in Coeur d'Alene, but are tabular, and likewise are not on GIS layers, but will be available in GIS with the implementation of LIMS. The

[23] Schoennagel, Tania, Balch, Jennifer, Brenkert-Smith, Hannah, Dennison, Philip, Harvey, Brian, Krawchuk, Meg, Mietkiewicz, Nathan, Morgan, Penelope, Moritz, Max, Rasker, Ray, Turner, Monica, and Whitlock, Cathy. 2017. Adapt to More Wildfire in Western North American Forests as Climate Changes. Proceedings of the National Academy of Sciences vol. 114, no. 18.

lack of a statewide database makes comparisons between IDL areas of activity fuel generation and removal difficult.

Recommendation:

- A consolidated GIS database for the various IDL areas that displays the patterns of sales, the consequent location of activity fuels, and the treatment and removal of these fuels over time, should be considered. Such a database would support the analysis of a potential relationship between the fuel layer characteristics created by the presence, or removal, of activity fuels, and the occurrence, cost, and behavior of wildfires in these areas.
- As noted by Helmbrecht (2016)[24], LANDFIRE fuel disturbance data (FDist) can be coded as a *mechanical remove* disturbance type to indicate activity fuels have been treated. If such fuels are not removed, the area can be classified as a *mechanical add* disturbance type. Such landscape-scale mapping can show the pattern of fuel treatments over time, as well as areas where treatment is falling behind. This information would be especially useful if the rate of timber harvest increases, and the rate of removal of subsequent activity fuels is falling behind, which was cited as a concern by IDL staff.
- The use of such maps, combined with fire behavior modeling, would provide an important tool to assist in the identification of any escalating wildfire risk; in the prioritization of fuels treatments; and in deployment of suppression resources. Such maps would also be useful formulating budget requests in support of suppression and fuels programs.

Finding:

- Several individuals commented on the effect smoke management regulations have on pile burning and prescribed fires, such as in obtaining approval to conduct burning activities from the Idaho-Montana Air Group (composed of state fire and air resource managers). If approval to burn is denied, IDL can appeal to the Idaho Department of Environmental Quality (DEQ). However, the basic problem with obtaining approval is that pile burning of activity fuels is usually conducted in the fall when air quality conditions tend to be unfavorable for good smoke dispersion, and approval is therefore not given.
- To extend the period when pile burning can be done, IDL is working with DEQ to identify a material to cover burn piles, which will keep piles dry enough to burn later in the season, but will not contain materials that

[24] Helmbrecht, Don. Wildfire Simulation Methods for the Rogue Basin Cohesive Forest Restoration Strategy, Appendix 2. USDA Forest Service 2016

produce unacceptable emissions when burned. If the piles can be kept dry, windows for burning later in the year can be used for ignition.

Recommendation:

- Another option to expand the window for pile burning would be to conduct in-season burns, in addition to the shoulder of the fire season. Concerns with this method include the possibility of escapes from the piles during fire season, as well as requiring a commitment of IDL staff to ignite, hold, and mop up piles. Burning under prescribed conditions in areas with good natural and constructed barriers to fire spread, and during periods of low to moderate wildfire activity, can mitigate such concerns.
- If it is determined that IDL is falling behind in the treatment of activity fuels because of a lack of burning conditions in the fall, resulting in an increasing fire hazard, such methods to expand the burning window should be considered.

Finding:

- On a local scale, the IDL activity fuels program is a high priority for IDL staff, and appears to be well run. It is largely site-specific in nature, related to the pattern of timber sales on state and private land. Similarly, the hazardous fuel program is also largely site-specific, associated with the use of federal grant funding to reduce hazardous fuel near communities.
- As noted in the Idaho Forest Action Plan (FAP) Accomplishment Report: 2008-2015, the 2008 Farm Bill describes national priorities each state must address within its FAP. These priorities include restoration of fire-adapted lands and reduction of the risk of wildfire impacts. In view of this large-scale goal, there appears to be no statewide fuels strategy to expand the fuels program beyond the activity fuels and WUI hazard fuels grant programs.
- IDL staff acknowledged that while IDL suppression planning is strong, landscape-scale fuels planning is weaker, and they would like to do more, such as with prescribed fire. Benefits of expanding the scale of the fuels program would include the creation of more ecosystem resilience to the occurrence of wildfire, especially if climactic conditions in western states continue to move toward longer fire seasons. This also supports a goal of the Cohesive Strategy.

Recommendation:

- It is recommended that IDL consider if the current patterns of work described in the FAP are achieving the resiliency and restoration goals described in the Cohesive Strategy, Farm Bill, and other guidance that has been issued since the National Fire Plan. This issue can be addressed through maps such as LANDFIRE showing landscape-scale trends in

condition class and fire risk. This requires the definition and establishment by IDL of the desired conditions that would support these goals, and the measurement of the degree to which they are being achieved with the current patterns of IDL activity fuels and hazardous fuels projects. If falling short, then an increased fuels program would be indicated.

- Expansion of the IDL fuels program beyond slash disposal and WUI project support would be a complex undertaking. The broader use of prescribed fire, and possibly the use of naturally ignited fire, on state lands would require thoughtful development of the restoration objectives for this work, as well of monitoring methods to evaluate results.
- There also would be many administrative issue to work through, such as the current policy of not paying overtime on prescribed fires, obtaining approval to send IDL employees out-of-state to conduct and gain training in prescribed fires, ands creation of IDL burn modules as work requires such support, all of which were identified as prescribed fire program issues in interviews.
- The work to increase and manage the fuels program is sufficiently complex, with a broad range of stakeholders both internal and external of the IDL organization with which to coordinate. A new IDL position is recommended to conduct this work; cost for this position is estimated to be $75,000.

Photo courtesy of IDL.

Chapter 3 Wildland Urban Interface

Current Situation and Predicted Trends

Idaho's population has been steadily increasing since 1980. In 1990, the population was approximately one million. The current estimated population is 1.6 million.[25] The greatest population growth has been in Boundary, Bonner, Kootenai, Valley, Boise, Canyon, Ada, Blaine and Teton counties (Figure 11). Population in the remaining 35 counties has been static or has a decrease. Overall, people are moving to Idaho, and, as is the case throughout the western states, many prefer to live in forested areas.

Of greatest concern for fire management agencies is the zone of Wildland Urban Interface (WUI), where people are building homes in areas adjacent to, and intermixed with, flammable vegetation. There is still much land to be developed throughout the western states. Research conducted in 2013 by Headwaters Economics indicated that Idaho ranks fifth of eleven western states in WUI development, with 87% of its WUI undeveloped. Shoshone, Clearwater, Idaho, and Bonner counties have the highest growth potential.[26]

The continued development within the WUI in Idaho has led to an increase in the number of Communities at Risk (CAR)[27] CAR's were originally defined as communities at risk from wildfire, and listed in the August 17, 2001 Federal Register. CAR's can be used to identify priority areas for emergency response, risk reduction planning, and hazard fuel reduction activities.

Figure 12 displays the distribution of communities at risk around Idaho, along with relative fire risk, while Figure 13 shows that Bonner, Idaho, Kootenai, and Shoshone counties all have more than 15 CARs within their respective county boundaries. Bannock, Bear Lake, Bingham, Clearwater, Fremont, Jefferson, Latah, Lemhi, Nez Perce, and Twin Falls counties all have 10 or more CARs within their boundaries.

The locations of CAR's, compared with the areas of greatest potential for WUI development, provide valuable information concerning current and future patterns of wildfire risk to the public. As this risk rises, suppression costs will also increase, which is being experienced by local, state, and federal jurisdictions throughout the western states.

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[25] U.S. Census Data

[26] https://headwaterseconomics.org/dataviz/wui-development-and-wildfire-costs/

[27] Briefing paper: Identifying Communities at Risk and prioritizing Risk-Reduction Projects (July 2010), National Association of State Foresters.

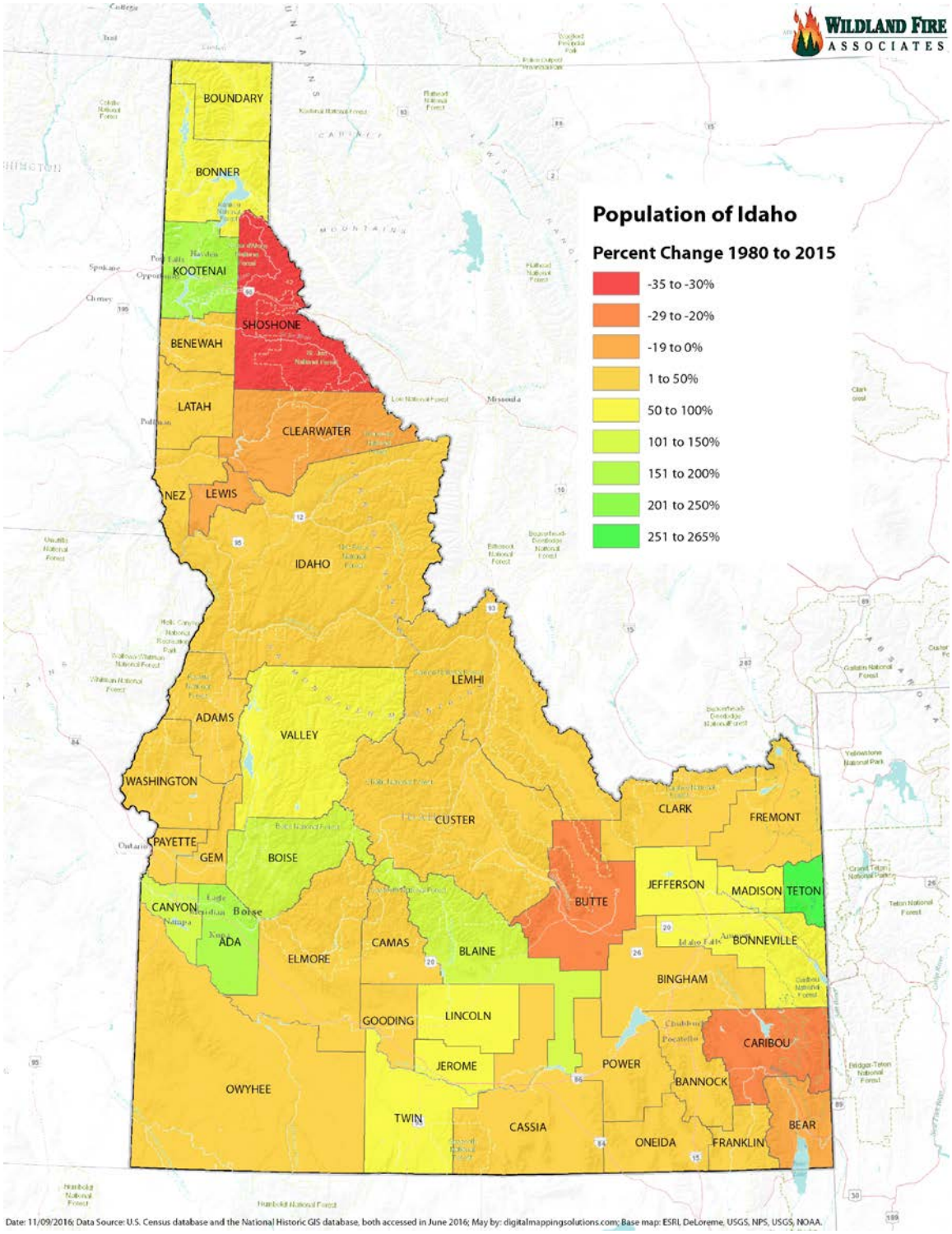


Figure 11 Population of Idaho - Percent Change from1980 to 2015

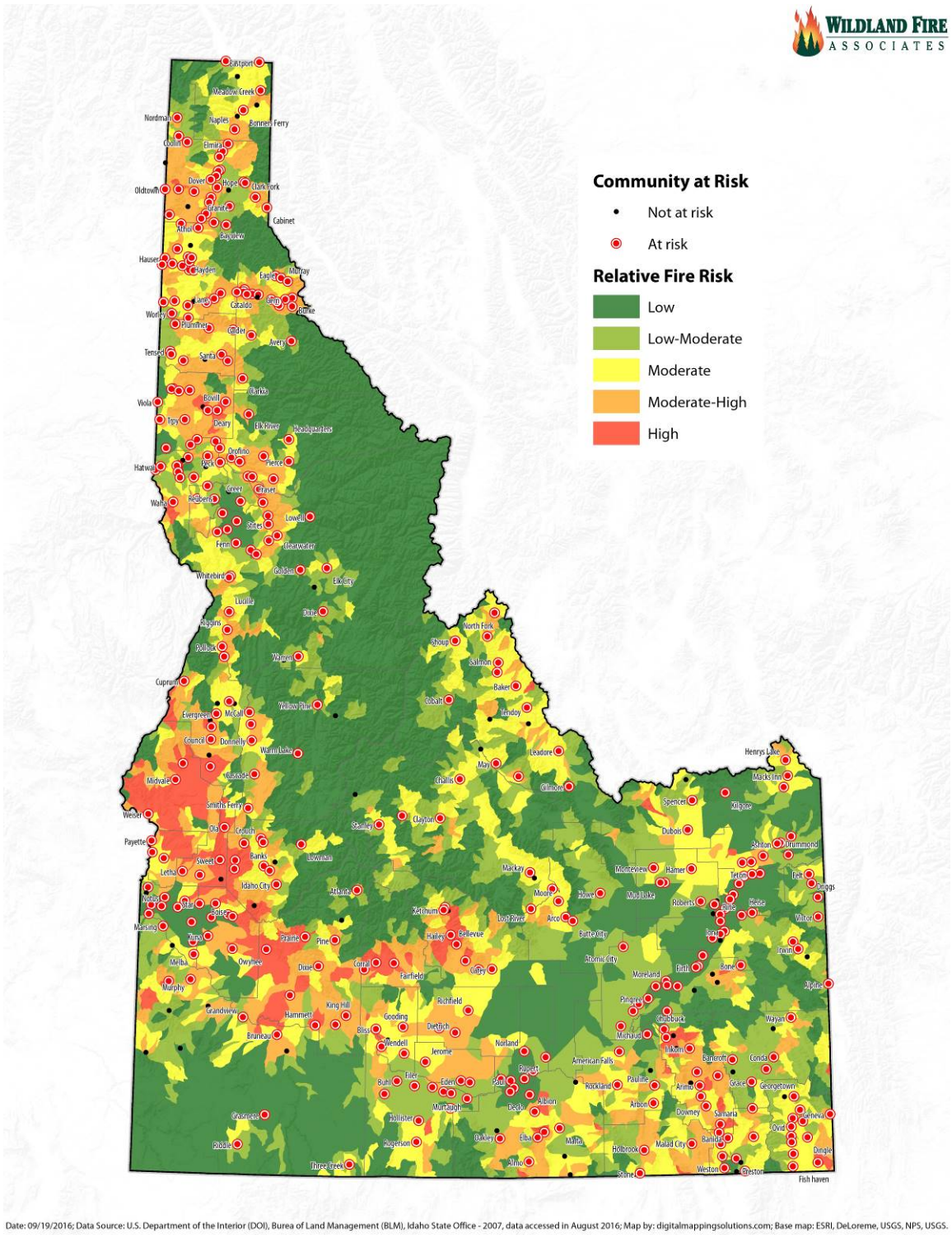
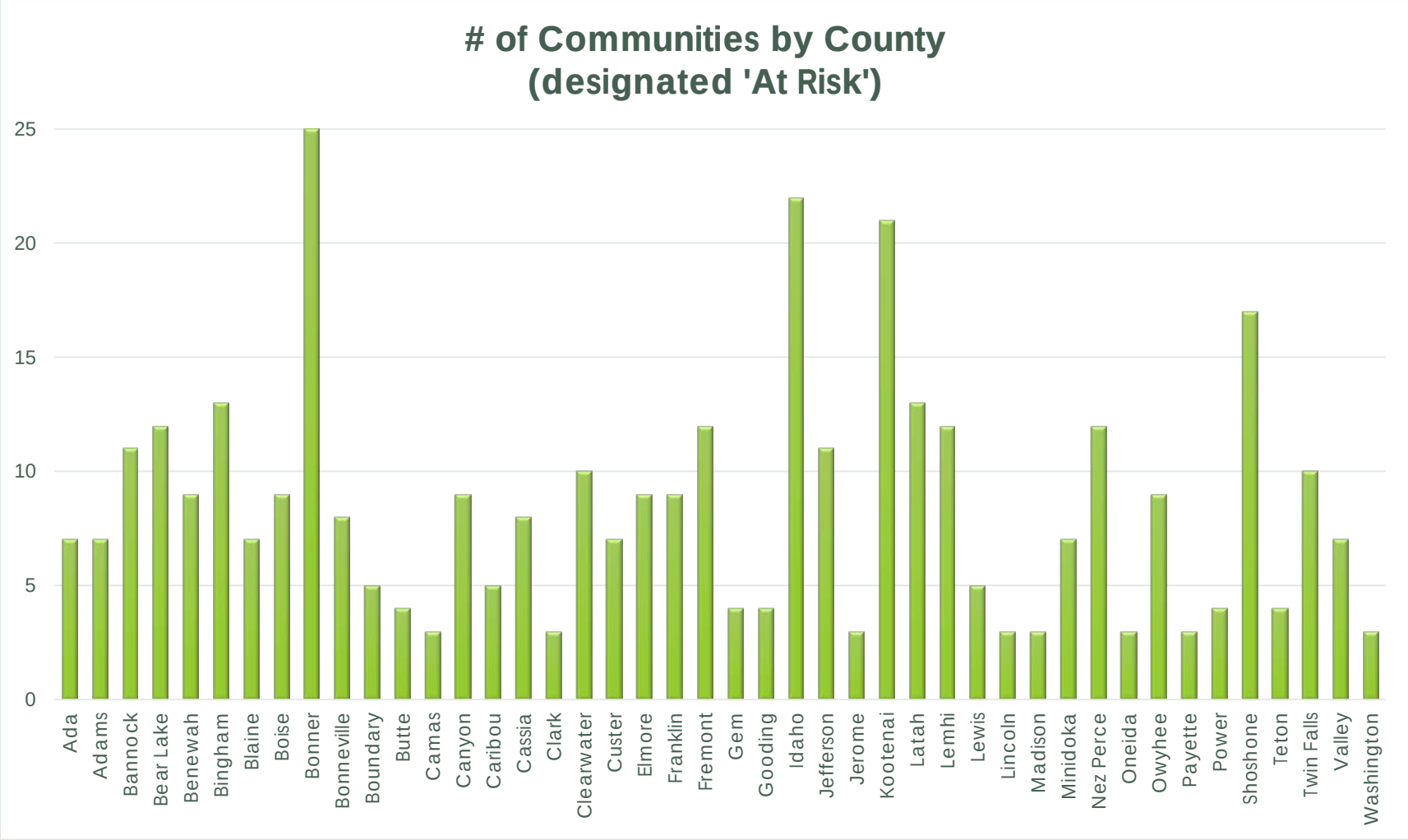


Figure 12 Communities rated at risk with relative fire risk (Federal Register, January 4, 2001)

Figure 13 Number of Communities by County Designated at Risk (Federal Register, August 17, 2001)



Impacts of WUI on Suppression Efforts and Costs

Suppression costs have risen steadily for many years at both state and federal levels. In 1985, the five federal fire agencies (USFS, USFWS, NPS, BIA, BLM) spent $240 million suppressing over 82,000 wildfires on 2.8 million acres; in 2000, this figure jumped to over 92,000 wildfires suppressed on 7.3 million acres at a cost of $1.4 billion.

By 2016, the National Interagency Fire Center reported that while the number of state and federal wildfires in 2015 had dropped to about 68,000, the acres burned increased to over 10.1 million (although much of this occurred in Alaska), and the suppression cost was $2.4 billion. Much of this cost was incurred by the U.S. Forest Service, which is currently spending about half of its entire budget on wildfire suppression.

Several factors are frequently cited for this increase in cost and acres, principally invasive species such as cheat grass in range types (which causes fast spreading fire behavior), climate change (leading to longer fire seasons due to less snowpack), drought (exacerbating tree mortality due to stress and insects), and increasing fuel loads, continuity, and density which have accumulated due to fire suppression (contributing to increasing wildfire size and costs).

While these factors can cause an increase in acres burned, the co-location of these burned acres with WUI is commonly cited as a significant source of escalating suppression costs. A study done in Wyoming[28] estimated that protection of a single, isolated home can increase suppression costs by $225,000.

Commitment of suppression resources, such as engines, to structural protection means that they are unavailable for suppression of the wildfire itself. The wildfire, in turn, can continue to grow and threaten still more structures, requiring more suppression resources and increasing suppression costs. It has become increasingly clear that protection of communities from wildfire requires improved risk reduction planning before a wildfire occurs, rather than a reliance on suppression resources after it does so.

Mitigation of Wildfire Risk to WUI Communities: Planning and Public Involvement

Originating with the National Fire Plan (2000), through the Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-year Strategy (2002; revised 2006), to the Healthy Forests Restoration Act (2003), significant guidance has been issued to reduce the threat and effects of wildfire. In response to this guidance, in 2006 the Idaho Statewide Implementation Strategy for the National Fire Plan was approved.

[28] Scofield, Anna, Rashford, Benjamin, McCleod, Donald, Coupal, Roger, Lieske, Scott, and Albeke, Shannon. 2015. Residential Development Effects on Firefighting Costs in the Wildland-Urban Interface. University of Wyoming Extension Publication B-1268.

Among the principal tools to implement this guidance is the Community Wildfire Protection Plan (CWPP). Developed by counties, communities, and neighborhoods across the country, the plan is developed collaboratively by many local stakeholders, addresses structural ignitability, defines the wildland urban interface (WUI), identifies and prioritizes hazard fuel reduction projects and treatments, and improves the interagency response to wildfire occurrence.

Working groups began to be established in 2002 in Idaho to develop CWPP's at the county level. County working groups are interagency in nature, are tasked with implementation of the CWPP, and contain a representative of IDL as appropriate. This representative is typically either the local IDL warden, or the Community Fire Program Manager who is located in Coeur d'Alene.

Since this time, all Idaho counties have developed CWPP's, and is some cases have engaged in updates and revisions. The IDL website has a page under construction to compile these documents, which will make a useful clearinghouse when completed.

A search for individual CWPP on county websites, such as Clearwater, Custer, Idaho, and Benewah counties, yielded an impressive collection of documents. County CWPP's display not only thoughtful planning, but also illustrate the seriousness with which counties view the threat from wildfires to public safety, economy, natural and cultural resources, and infrastructure. The CWPP's contain many action items and hazard reduction projects which represent a complex effort by the counties to address wildfire risk.

More recently, Planning for Wildfire in the Wildland-Urban Interface: A Resource Guide for Idaho Communities[29] was jointly produced by the University of Idaho, IDL, and Boise State University. This guide consolidates the best current practices related to wildfire planning, and provides a recommended framework to engage communities in meaningful wildfire planning.

This report emphasizes the importance of CWPP's and the four parts of the risk mitigation process: draft and adopt a CWPP; develop regulations and incentives to reduce wildfire risk to developments; implement, maintain, and enforce these regulations and incentives; and respond to changes, such as wildfire occurrence, over time.

The report also contains data from a Risk Perception Survey sent to 20,000 Idaho households. The survey provides a useful assessment of the range of the public's knowledge and perception of the wildfire hazard. For example, while 68% see

[29] Miller, Stephen R. and Wuerzer, Thomas and Vos, Jaap and Lindquist, Eric and Mowery, Molly and Holfeltz, Tyre and Stephens, Brian and Grad, Alexander, Planning for Wildfire in the Wildland-Urban Interface: A Resource Guide for Idaho Communities (September 28, 2016). Available at SSRN: https://ssrn.com/abstract=2845046 or http://dx.doi.org/10.2139/ssrn.2845046

themselves as responsible to protect their homes, 18% believe it's the responsibility of the local fire department.

The survey also states that while 38% of the respondents knew about fire-prone areas by themselves, only about 2% had received information about wildfires from cities or counties. The survey also found that nearly 75% of the respondents never discussed wildfire prevention with neighbors, only 35% knew about the Firewise program, and less than 10% had attended a workshop on wildfire hazards.

The report also states that "one of the limiting factors in the success of CWPP's in Idaho in the past has been that they have been conducted solely at the county level by a select group of fire community individuals" rather than at many scales and by many diverse members of the community…..Idaho Department of Lands seeks to encourage the preparation of CWPP's at multiple scales, as contemplated by federal law and practiced in other Western states."

This statement may explain why only 2% of the public responded that they had received information from cities or counties. It may be due to a CWPP planning process that primarily involved the "select group" noted in the report, rather than also involving a broader participation by interested groups and citizens.

A primary value of a CWPP is that it provides an opportunity to educate the public as well as a variety of stakeholders on the nature of the wildfire risk, to develop the CWPP as a workgroup with a variety of backgrounds and interests, to learn how they can mitigate the risk through prevention, fuel treatments, preplanning for fire response, and to use best practices for the design and location of developments. Its educational value is greatly enhanced by public and local government participation at scales down to individual neighborhoods and homeowner associations, fine-tuning the CWPP to include and address local concerns and solutions.

IDL has a functional role in these planning activities, not only at the county level but also at a variety of town and neighborhood levels, with participants involving representatives from emergency response agencies as well as a wide variety of groups and individuals affected by wildfire. IDL is positioned to share lessons learned from many CWPP's around Idaho, and to provide a framework for a statewide effort to involve and inform the public on how they can participate in the reduction of risk and loss due to wildfire.

The volume of work involved in this planning and education effort is substantial. Survey data of IDL employees (Appendix E) indicates that they understand this and are concerned about not only wildfire risk to WUI, but the degree to which IDL is participating in the mitigation of risk to WUI communities.

Mitigation of Risk to WUI Communities: Hazard Reduction Projects

One of the most valuable products of the CWPP process is a locally created list of hazard fuel projects, which can reduce wildfire risk to Idaho WUI communities. These projects are accomplished in a variety of ways, but typically use either hand or mechanical methods. The strategic location of these projects can greatly facilitate efforts to suppress wildfires and to protect structures from damage.

In support of wildfire risk reduction in the Idaho WUI, IDL has received approximately $16 million in federal grant funds since 2007, which have been used to treat approximately 12,124 acres between 2007 and 2016 , as described in the Idaho Forest Action Plan Addendum 1, September 2015, and by IDL staff. This work is spread throughout 13 Priority Landscape Areas (PLA's) identified in the Forest Action Plan.

Idaho has been quite successful in obtaining federal grant funds from Hazardous Fuels Reduction (HFR, from USFS Regions 1 and 4) and Western States Fire Manager (WSFM) sources. IDL data indicate the number of grant applications, rate of success, and amounts:

2012: seven WSFM applications; one funded for $120,000

2013: three WSFM applications; one funded for $292,100

2014: four WSFM applications; two funded for $600,000

five HFR applications; five funded for $773,100

2015: seven WSFM applications; three funded for $900,000

five HFR applications; five funded for $607,840

2016: six WSFM applications; five funded for $1.35 million

two HFR applications; two funded for $400,000

The average grant allocation from the USFS to Idaho is about $1.6 million annually, although this has ranged from $4.8 million in 2009 to $590,000 in 2012. The greatest acreage treated was 5,958 in 2009, with annual activity typically running between 1,000 and 2,000 acres after the grant 5-year time period closes.

Much of this fuels treatment is done by hand or mechanically, rather than by the use of prescribed fire, resulting in a high cost per acre, which is not unusual in this type of work. However, IDL staff believes that a decrease in acres treated is likely to occur in the future as hazard reduction projects become more complex and therefore more expensive. As cost per acre rises, acres treated will proportionally drop if grant funding is relatively constant.

Comparing the Idaho WUI hazard reduction program with its neighboring states, a number of differences are noted, and in particular the amount of funding and staffing allocated by each state to this type of work. Using information provided by IDL staff, neighboring states have the following examples of state-funded hazard fuel program components:

Nevada: approximately $500,000 for eight positions involved with planning, supervising, and implementing WUI fuels reduction projects

Oregon: $2.88 million for 2013-2015 biennium; $5.4 million for 2015-2017 biennium; and $4.4 million (proposed) for 2017-2019 biennium. These funds are invested in the Oregon Federal Forest Health Program. While not specific to wildfire mitigation, it does support this effort through increasing the pace of forest restoration, watershed protection, and resilience to wildfire, with accompanying economic benefits.

Washington: $1 million for creation of Firewise communities, split between staff and project costs, and $2 million for cost-share treatments, for 2015-2017 biennium. Washington has a performance measure of creating 177 Firewise communities. Like Oregon, the program is oriented around forest health issues and not specifically wildfire mitigation, though the work does support this activity.

Utah: $1.9 million in FY15, $2.5 million in FY16, and $1 million in FY17, which supports agency personnel and project implementation.

Montana: $1 million each biennium for federal lands; up to $5 million on non-federal lands through a competitive grant process, with private landowners the predominant beneficiary. The source of these funds is a state law (76-13-150) which permits up to $5 million per biennium in the fire suppression account to be used "for the purpose of fuel reduction and mitigation and forest restoration."

Idaho: While Idaho has strong program in the reduction of activity fuels due to logging on endowment lands, its allocation of state-appropriated hazard fuels funds in support of community wildfire risk reduction planning and projects is zero. Based on discussion with IDL staff, Idaho hazard fuels work near WUI communities (as opposed to the reduction of activity fuels on IDL endowment land) is entirely federally funded.

Idaho's reliance on federal funding extends to staffing and support for hazard fuels work within the IDL organization. IDL allocates $60,000 from each federal grant to WUI hazard reduction program administration, including the position of the Community Fire Program Manager and IDL administrative and contract staff who support the work.

Examples of this retention are:

2016: $178,288

2015: $205,988

2014: $147,553

IDL's 50/50 contribution for a National Fire Plan Coordinator position shared with the Forest Service also comes from these administrative charges on federal grants. The Forest Service is therefore essentially paying for both portions of the shared position. The use of federal funds for these IDL positions reduces the amount of grant funding available for hazard reduction projects around WUI communities, and to implement their CWPP's.

Findings and Recommendations

Finding:

- Western states have similar complex planning efforts and hazard reduction activities in response to their own identified risk and experience with wildfire occurrence. The nature of the wildfire threat varies in each state because of differences in fuels, climate, topography, fire season, history, behavior, and effects, and land ownership patterns.

Therefore, there is little value in attempting to compare these programs in an effort to establish definitely what any state, including Idaho, should contribute to WUI hazard reduction work, or how many acres it should treat. A comparison with other western states at best indicates the costs and scale of work generally encountered in hazard reduction work.

The finding is that neighboring states use a combination of federal and state funding sources to assist WUI communities in planning, evaluating and implementing hazard reduction projects. Idaho does not provide an equivalent level of support. Total reliance on federal funding to support the Idaho WUI hazard reduction program exposes the program to an uncertain future. Decreasing federal funding due to budget cuts, federal restriction on where and how these funds may be used, increasing competition for WUI funds, and increased cost and complexity of hazard fuel projects, may result in fewer acres treated in Idaho.

Recommendation:

- We recommend that IDL increase program funding. While there is no recommendation as to the amount Idaho should fund its program, reference to other states would indicate that $500,000 to $1,000,000 annually would at least place Idaho on par with neighboring programs, and position it for a hazard mitigation leadership role among states.

Hazard fuel funding from the state would ensure that Idaho's priorities are addressed, without the strings and uncertainty accompanying federal funds. This uncertainty will almost certainly increase as federal funds tighten and more WUI communities compete regionally and nationally for these funds. State-funded

hazard reduction projects would ensure that such work is done in locations that directly support IDL's suppression objectives.

Even simply funding the Community Fire Program Manager from Idaho funds would stabilize this position from future federal funding cuts and put more federal funding back into community protection projects.

Finding:

- Staffing for the community protection/hazard fuels program is essentially a single position, the Community Fire Program Manager, who travels thousands of miles each year to participate, and to represent IDL, in CWPP and hazard reduction project development and implementation.

  The high success rate of the number of grant applications vs. grants approved is indicative of the effectiveness of this position. Missing from the hazard fuels program, however, given that CWPP's are most effective when developed to mitigate specific, ongoing, local wildfire hazards, are local field project coordinators who are dedicated to help individual counties, communities, and neighborhoods develop, manage, and monitor treatments, and to conduct education activities. The positions would also provide coordination between IDL fire staff, public affairs staff, area managers, and various stakeholders, rendering more consistent and effective hazard reduction and education programs through broader information exchange.

Recommendation:

Local IDL mitigation staffing would specifically address the factor limiting the success of CWPP's in Idaho noted by Miller et al. (2016) by facilitating the development of CWPP's at multiple scales, in addition to the current county scale. The IDL staff would provide local coordination and leadership in the mitigation of wildfire risk to Idaho communities and to associated natural resource values, including those of concern to IDL.

Recommendation:

- It is recommended that the program be integrated within the IDL Fire Bureau. The Community Fire Program Manager, a relatively new position, is currently located in Forestry Assistance, co-located with other landowner assistance functions. Locating this position in the Fire Bureau would be a better fit, since CWPP work is done largely with volunteer, rural, and federal fire management organizations. The location of this position in the Fire Bureau would also facilitate the coordination of the planning, execution, and monitoring of hazard fuel reduction projects with IDL fire staff, such as engine and aviation personnel.

This coordination activity can also be an important factor in addressing the issues of career ladders and length of appointments, which have been identified as widespread concerns in the IDL fire workforce. A stronger case can be made for longer appointments, beyond the typical suppression season which is largely confined to summer, by including in position descriptions duties such as mechanical fuel reduction projects, planning and execution of prescribed fires, and involvement in CWPP planning, fire prevention, and public education activities, for example.

Photo courtesy of IDL.

Chapter 4 Prevention

Current Program Status

The fire prevention program is directed by policy within the Fire Management Handbook (FMH). FMH 820 directs the IDL fire staff to do the following:

- Designate one person at each Area Office as the District Fire Prevention Coordinator.
- The District Fire Prevention Coordinator should dedicate five hours per week for prevention (this is a policy recommendation).
- The District Fire Prevention Coordinator should participate in local fire prevention cooperatives.
- Recognize that effective fire investigation is key in determining wildfire causes and subsequent fire prevention actions taken to address these causes.
- Include the following elements in prevention planning: (1) analysis of the causes of preventable wildfires; (2) evaluation of the effectiveness of prevention alternatives; and (3) public education.
- Develop district prevention plans that include a list of agency cooperators, media formats to be used, prevention methods to be used, community events in which to participate, and industrial inspections as possible planned prevention actions.

Fire prevention work within IDL is conducted primarily at the area offices in conjunction with local, county and federal cooperators. Work includes activities at schools, fairs, parades, and other opportunities as they arise. (see Appendix B for list of 2016 prevention activities)

A part-time (0.67 time) Fire Prevention position is located at the Fire Bureau. This position is tasked with supporting fieldwork, providing prevention supplies to the field, and representing IDL on both NRCG and GBCG prevention committees. This position is also Director of the Keep Idaho Green Association and the liaison with the Idaho Firewise program. The Forestry Assistance Bureau is responsible for work within IDL that involves fuels mitigation or working to attain the goals of the National Cohesive Wildland Fire Strategy[30]. The Fire Bureau and Forestry Assistance Bureau coordinate their prevention efforts.

Variation between Districts

Based on a review of Prevention Plans from six districts[31], there is significant variation in the programs between the districts. Appendix B provides a detailed

[30] A collaborative strategy that encourages involvement of all levels of government, non-governmental organizations, and the public to address wildland fire management issues.

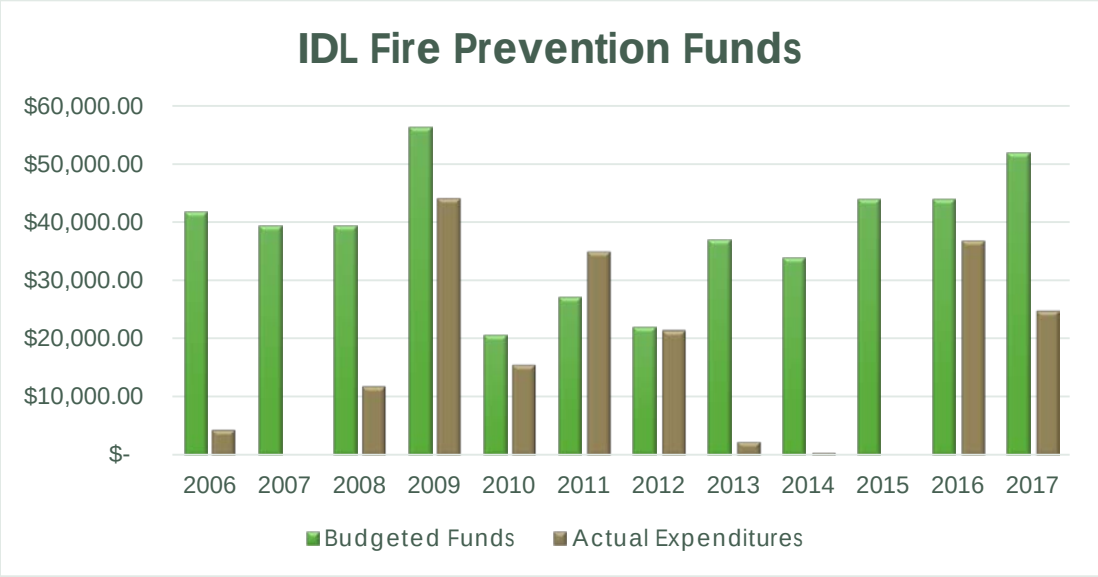
[31] Maggie Creek, Cataldo, Bonners Ferry, Ponderosa, Priest Lake, and Mica

list of prevention activities on each district, and highlights the variation between the programs.

Prevention Program Funding

Budgets for prevention have varied over the last 12 years (Figure 14). Based on data on budgeted funds and actual expenditures provided by IDL, it appears that only 43% of the allocated amount was used during this time period. Other than FMH 820 direction, there does not appear to be any prevention target or associated budget amount.

Figure 14 IDL fire prevention budget and actual expenditures from 2006 to 2017.



The current funding for the Fire Prevention Specialist includes a $30,000 federal grant[32]. No other grant money is funding the prevention program at this time.

A discussion of grants can be found in Chapter 2. The current Fire Prevention Specialist does not currently work with any grants.[33]

[32] Direct communication from the Fire Prevention Specialist

[33] Based upon interviews with IDL staff

The following graphs show that although the overall number of human-caused fires is decreasing, the suppression cost associated with these fires is increasing. (Figure 15). Additionally, these costs are significant; greater than $3 million annually. (Figure 16)

Figure 15 Suppression Cost of Human-caused Fires by Year from 1983 to 2016 (in 2015 dollars)

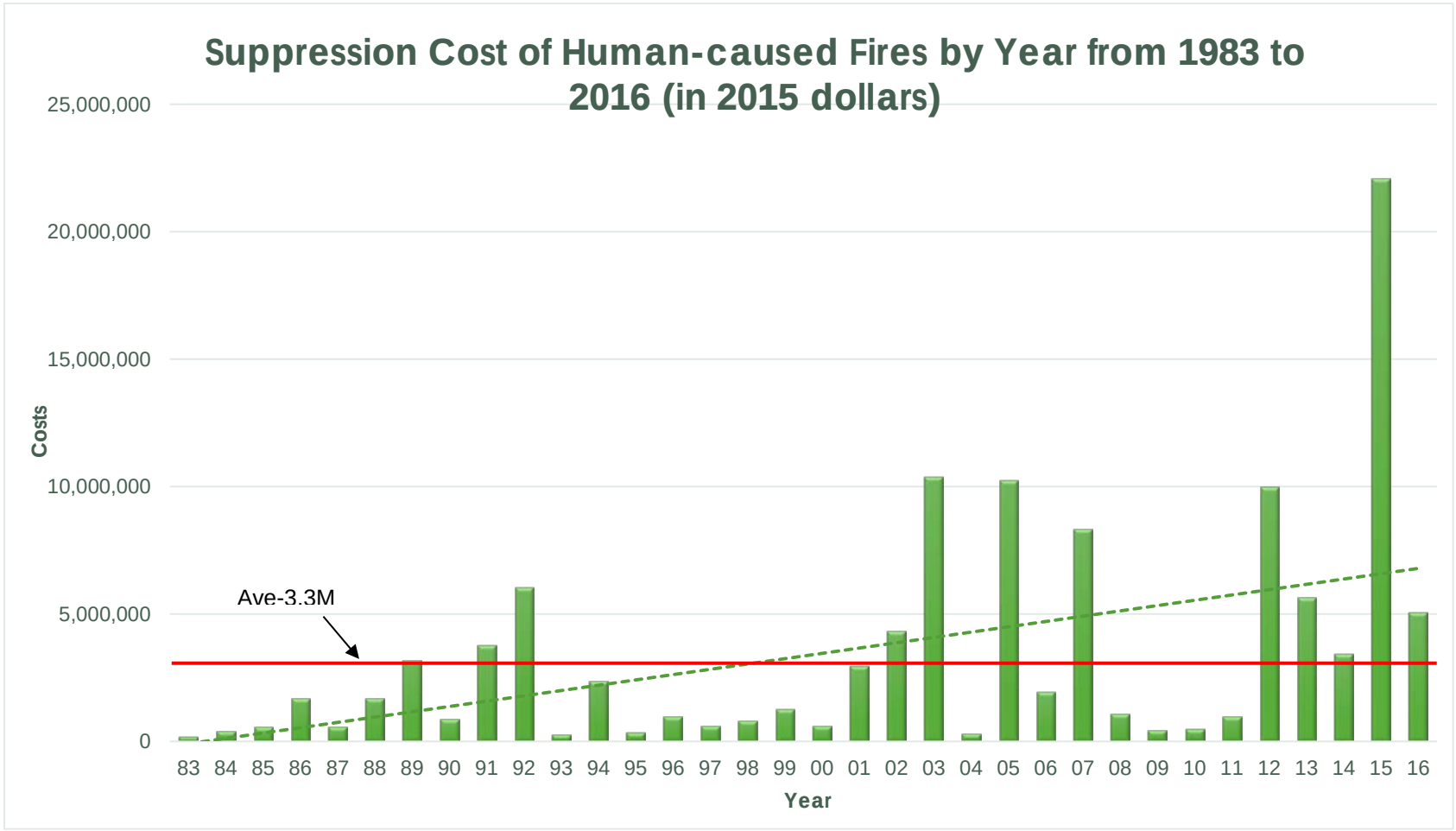
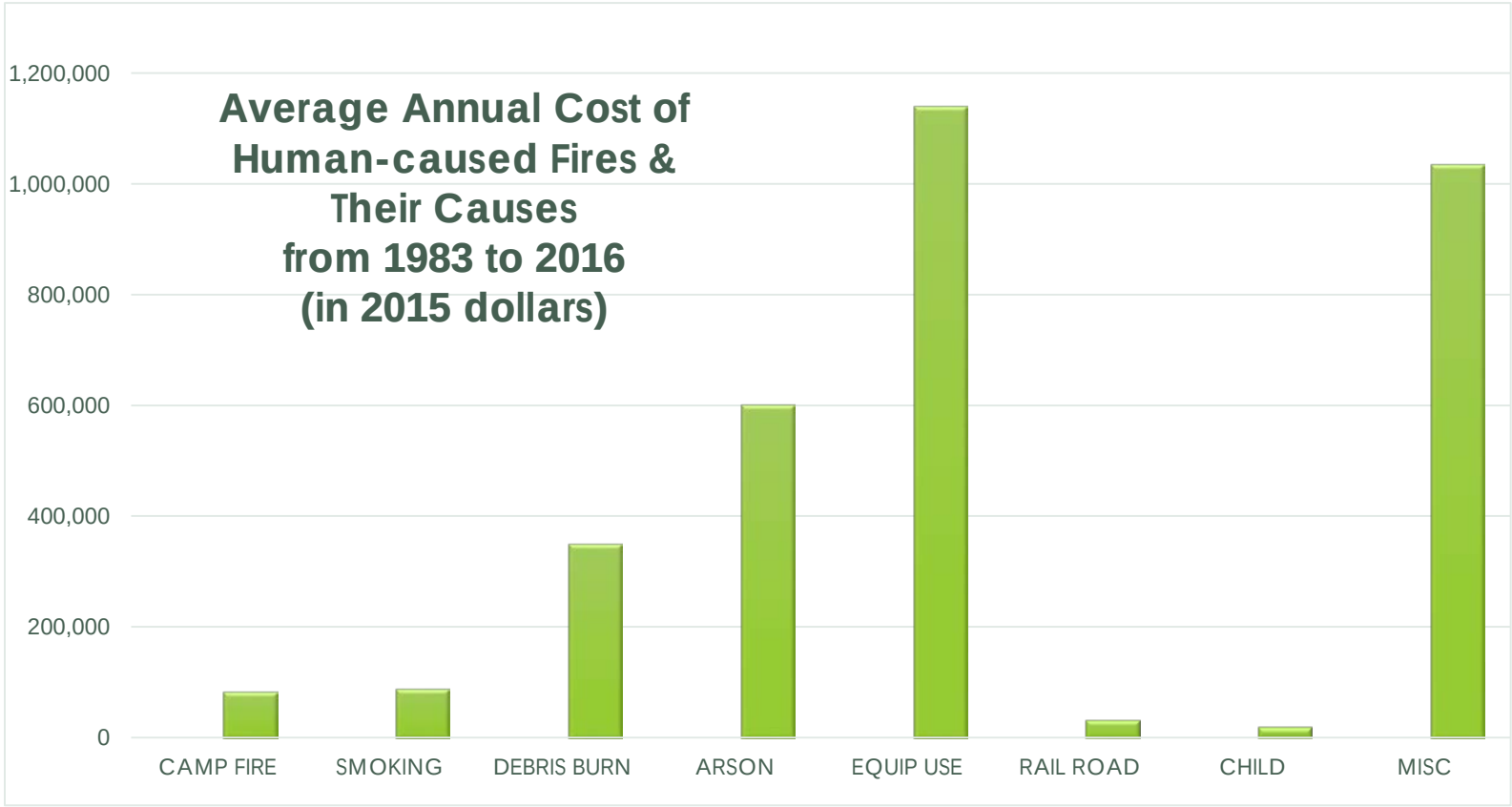


Figure 16 Average Annual Cost of Human-caused Fires & Their Causes from 1983 to 2016 (in 2015 dollars).



Findings and Recommendations

Findings:

- Currently IDL field operations at Fire District offices are not meeting several of the prevention goals stated within the FMH 820.
- Important fire mitigation work is being conducted outside of the Fire Bureau in the Forest Management Assistance Bureau with minimal coordination with the Fire Bureau.

Recommendations:

- Fire Wardens, in conjunction with Fire Bureau staff, should review current IDL fire program prevention goals and policies, and update the FMH 820 accordingly. Goals that are no longer deemed a priority, such as industrial and railroad inspections, should be dropped.
- IDL policy should be updated to reflect the current division of fuels mitigation from the fire program. New policy should provide guidance to encourage and facilitate coordination and communication between the programs.

Finding:

- Current staffing and funding of the IDL statewide fire prevention program is minimal compared to other states. The IDL Fire Bureau prevention position is 0.67 FTE, while other similar state programs, such as Montana, Oregon and Washington, have one to three professional level, full-time positions focused on fire prevention and fire restrictions.

Recommendation:

- The Fire Bureau Prevention Specialist position should be converted to a full-time position. The approximate cost for this recommendation is **$25,000**.
- To support the prevention specialist position, IDL should consider investing more funding targeted at fire prevention. This could include funding for additional staff training, materials, and associated travel.

Finding:

- IDL fire program funding allocated to fire prevention has not been fully used over the last 12 years.

Recommendation:

- IDL fire program managers should assure full use of funding allocated to fire prevention.

Photo courtesy of IDL.

Chapter 5 Pre-Suppression (Preparedness)

Safety and Training

Firefighter safety is paramount in any fire management program. Access to high quality training and fire assignments are the best way to ensure that firefighters are well trained and qualified so they can safely and effectively execute their mission. IDL takes safety seriously, and employees at the bureau, area and district levels indicated that safety is part of their daily morning briefings and included in all their fire operations.

IDL has a Fire Training/Safety Specialist position at the bureau level to provide oversight and direction for training and safety. Overall, the training conducted and available to employees was considered a highlight of this program area from those interviewed. Both permanent and seasonal employees have ample training opportunities to access classes through the S-200 level courses. Opportunities for seasonal employees are limited for courses at the S300 level because they lack the ability to attend training outside the terms of their employment. This break in the training and qualification sequence has restricted the ability of the Fire Wardens to build the necessary knowledge, skills, abilities, and depth in their respective organizations.

The Fire Wardens have developed an IDL Engine Academy, which is considered a success by all participants. The Fire Wardens have made a commitment to the firefighters to conduct this academy on an annual basis.

IDL has a Supervisory Academy for all incoming resource specialists, including the Assistant Fire Wardens. IDL makes the L-180 to L-480 Fire Leadership courses available to all firefighters qualified to attend. IDL has also partnered with Boise State University to develop a two-year leadership program. Selected permanent employees are given the opportunity to identify, address and resolve real world issues specific to the Agency. The program has been very successful in developing advance leadership skills and future leaders.

Qualifications

After reviewing qualifications and succession planning, IDL has been successful in developing single resource firefighting skills through the Division Group Supervisor and Incident Commander Type 3 levels, but skills of both fire and non-fire employees at the Type 1 and 2 levels are inadequate. The breakdown is as follows:

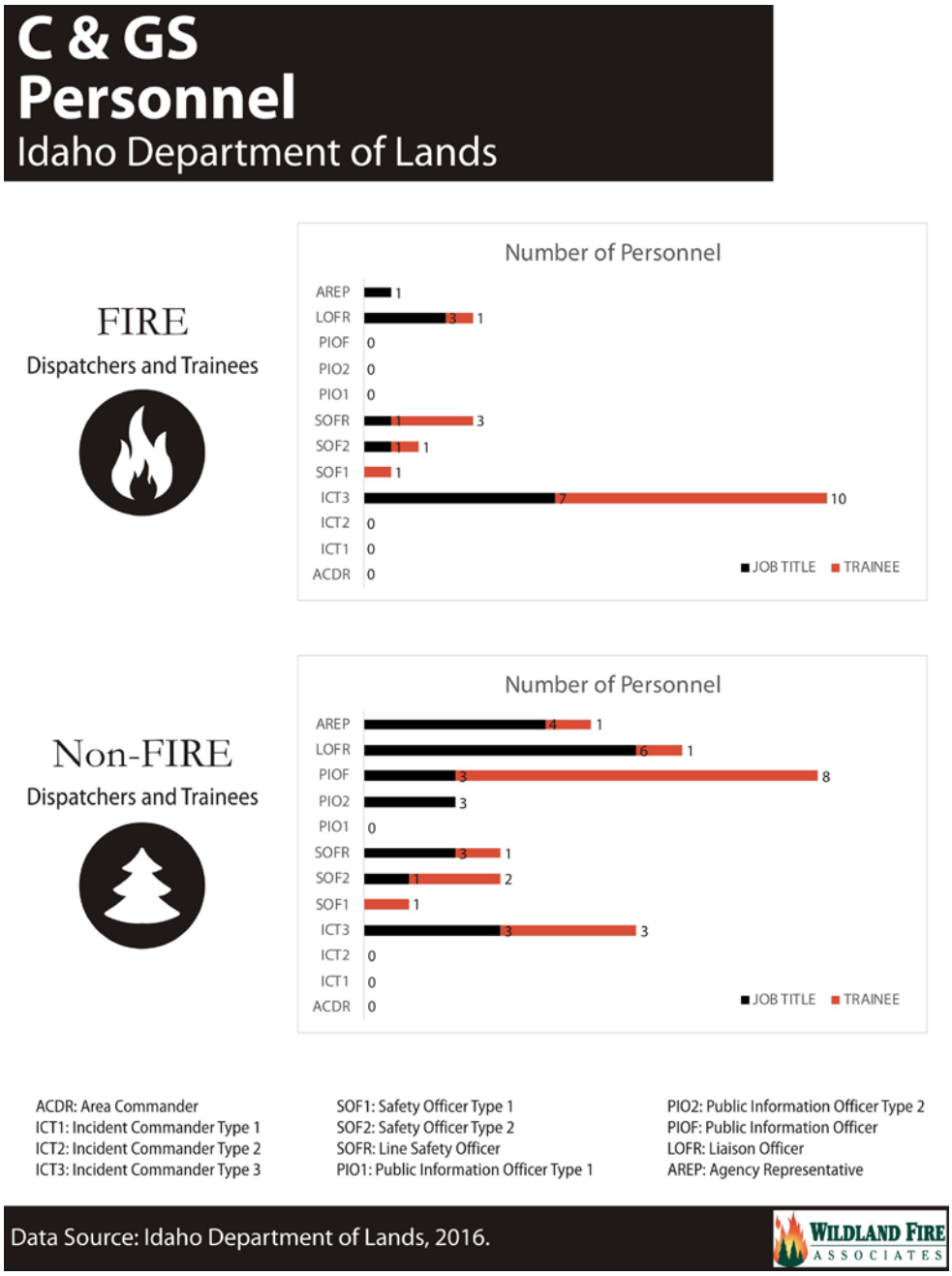


Figure 17 Number of Command and General Staff Personnel

At the Type 3 Incident Commander level, Type 3 (ICT-3) skills are adequate and there are a sufficient number of trainees in the program to replace one or more of the ICT-3 should a vacancy occur. However, the real problem is their availability during the higher Preparedness Levels, 4 and 5.

There is a need to develop individual qualifications and skills at the Incident Commander Type 2, Safety Officer Type 2, Public Information Officer Type 2, and Public Information Officers levels.

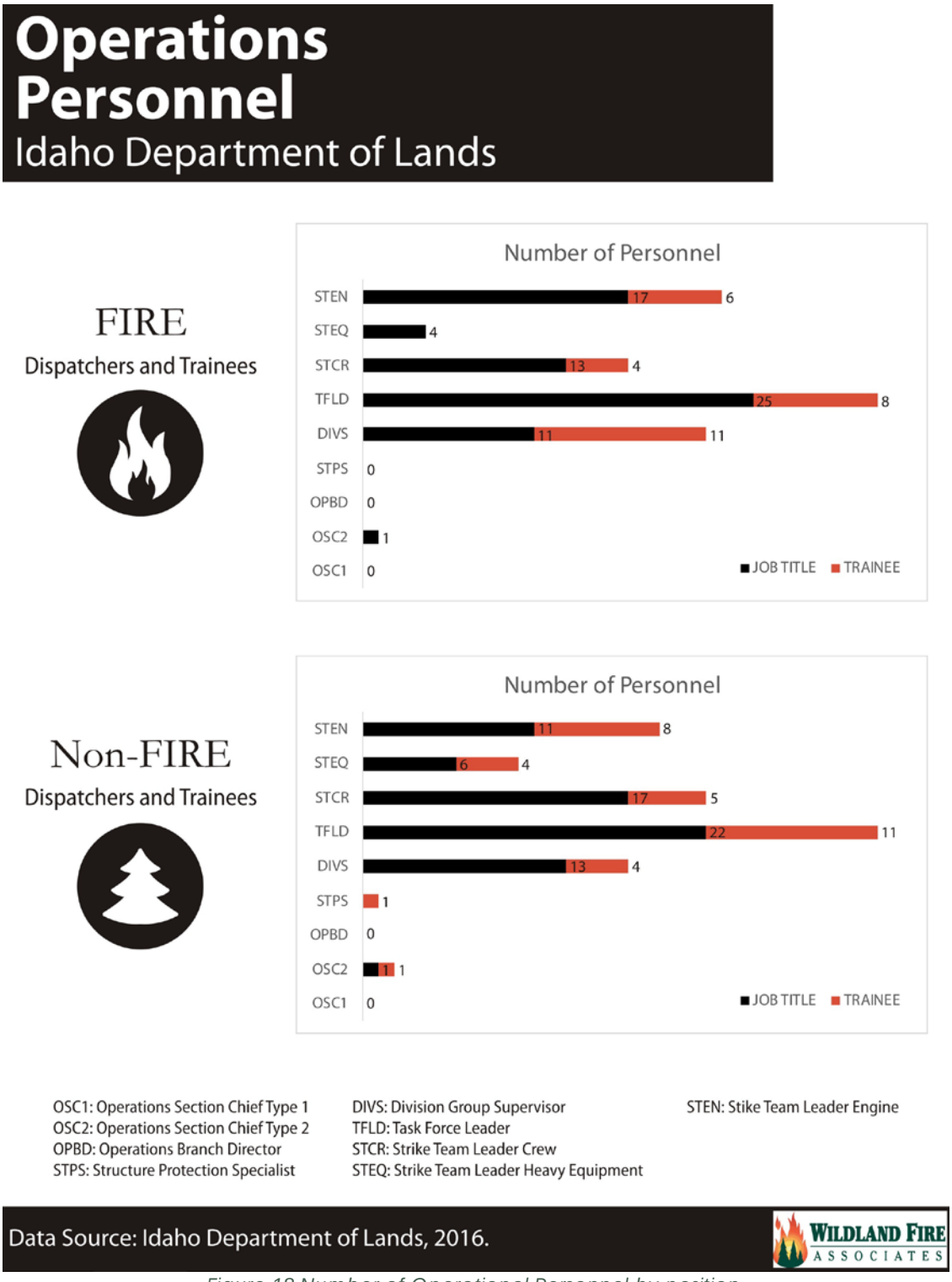


Figure 18 Number of Operational Personnel by position.

At the division level and lower there is an adequate number of qualified employees, with almost equal participation between fire and non-fire employees. However, there is a need to develop skills and qualifications at the Operation Section Chief Type 2 level.

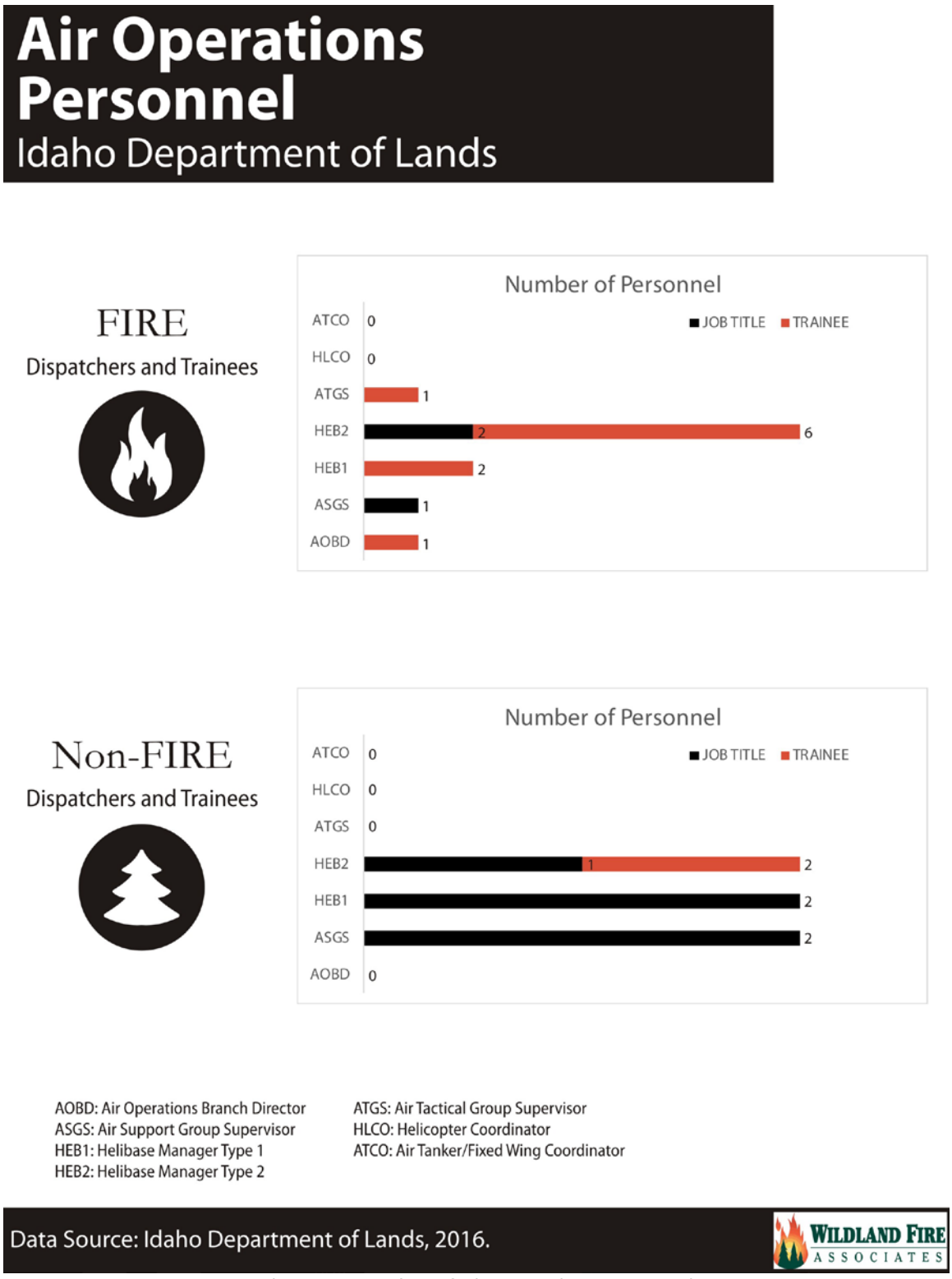


Figure 19 Number of Air Operations Personnel

Air operations skills and qualifications are inadequate, and there is a need to develop skills and qualifications at the Air Tactical Group Supervisor, Air Support Group Supervisor, and Helibase Manager Type 1 and 2 levels.

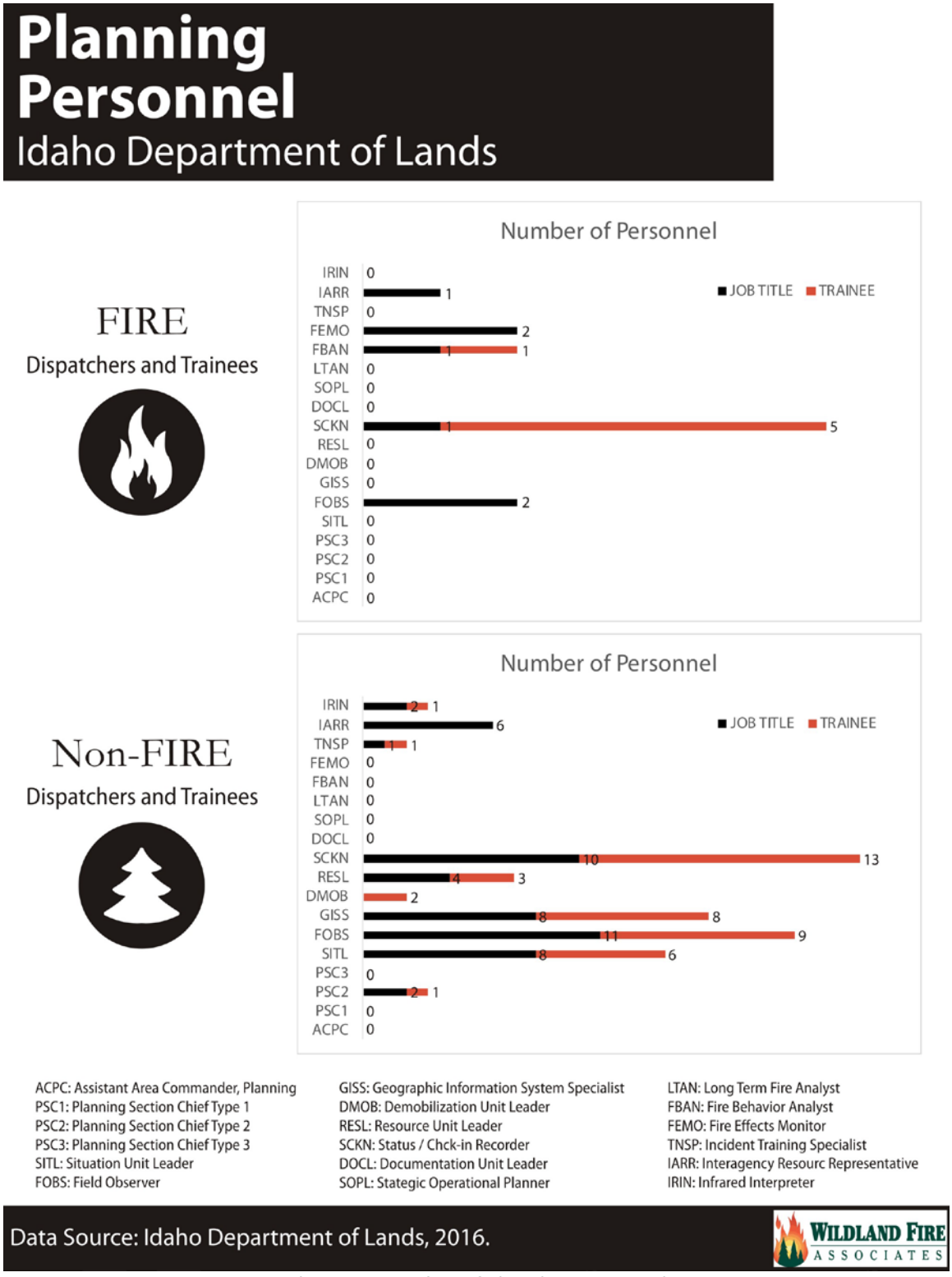


Figure 20 Number of Planning Personnel

Planning skills and qualifications are inadequate, and there is a need to develop skills and qualifications at Planning Section Chief Type 2 and 3, Fire Behavior Analyst, and Resource Unit Leader levels.

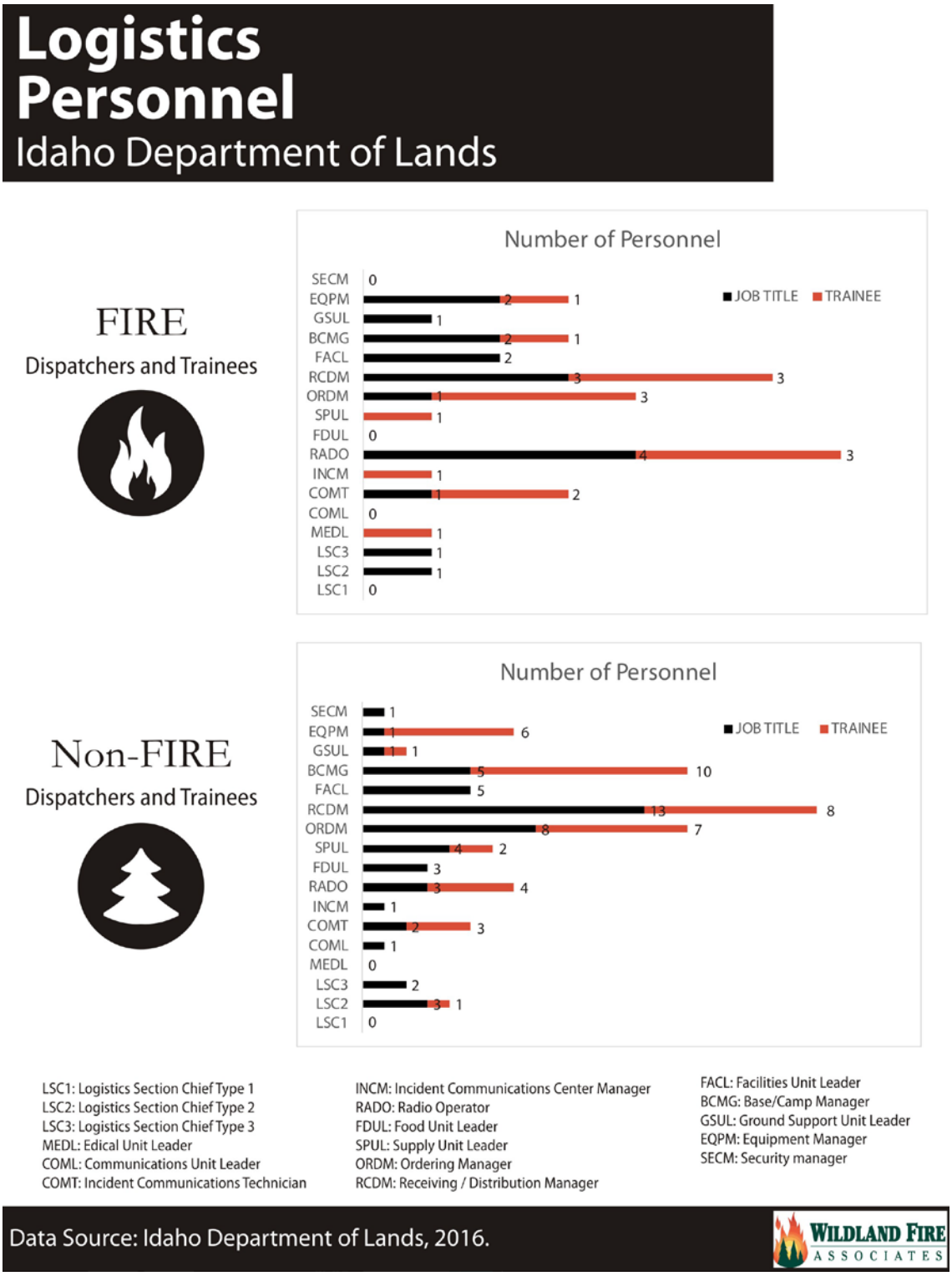


Figure 21 Number of Logistics Personnel

Logistics skills and qualifications are adequate at the Type 2 and 3 levels, but there is a need to develop skills and qualifications at the Ground Support Unit Leader, Food Unit Leader, Incident Communications Center Manager, and Communications Unit Leader levels.

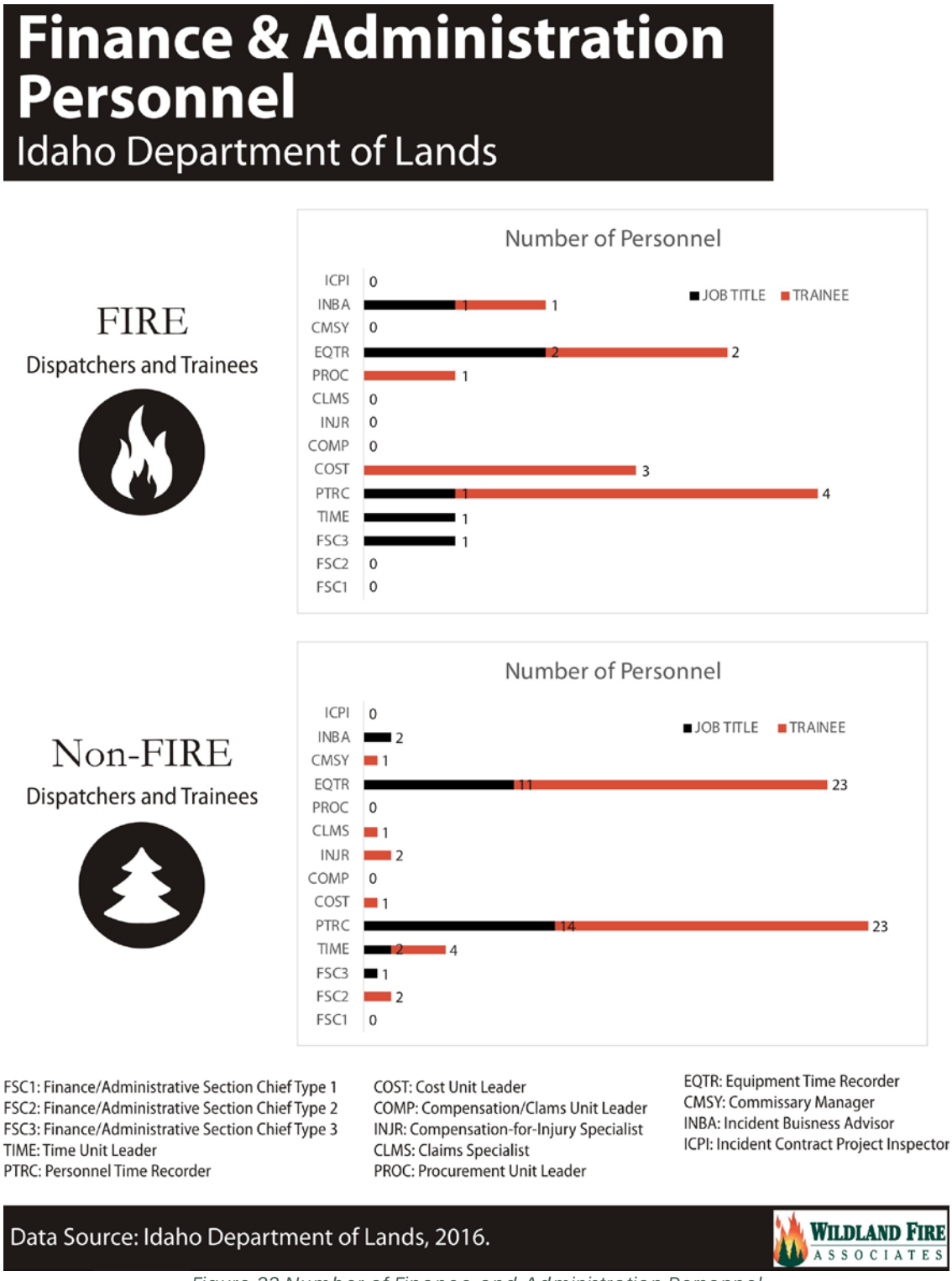


Figure 22 Number of Finance and Administration Personnel

Finance skills and qualifications are inadequate, and there is a need to develop skills and qualifications at the Finance Section Chief Type 2 and 3, Cost Unit Leader, Time Unit Leader, Procurement Unit Leader, and Incident Business Advisor levels.

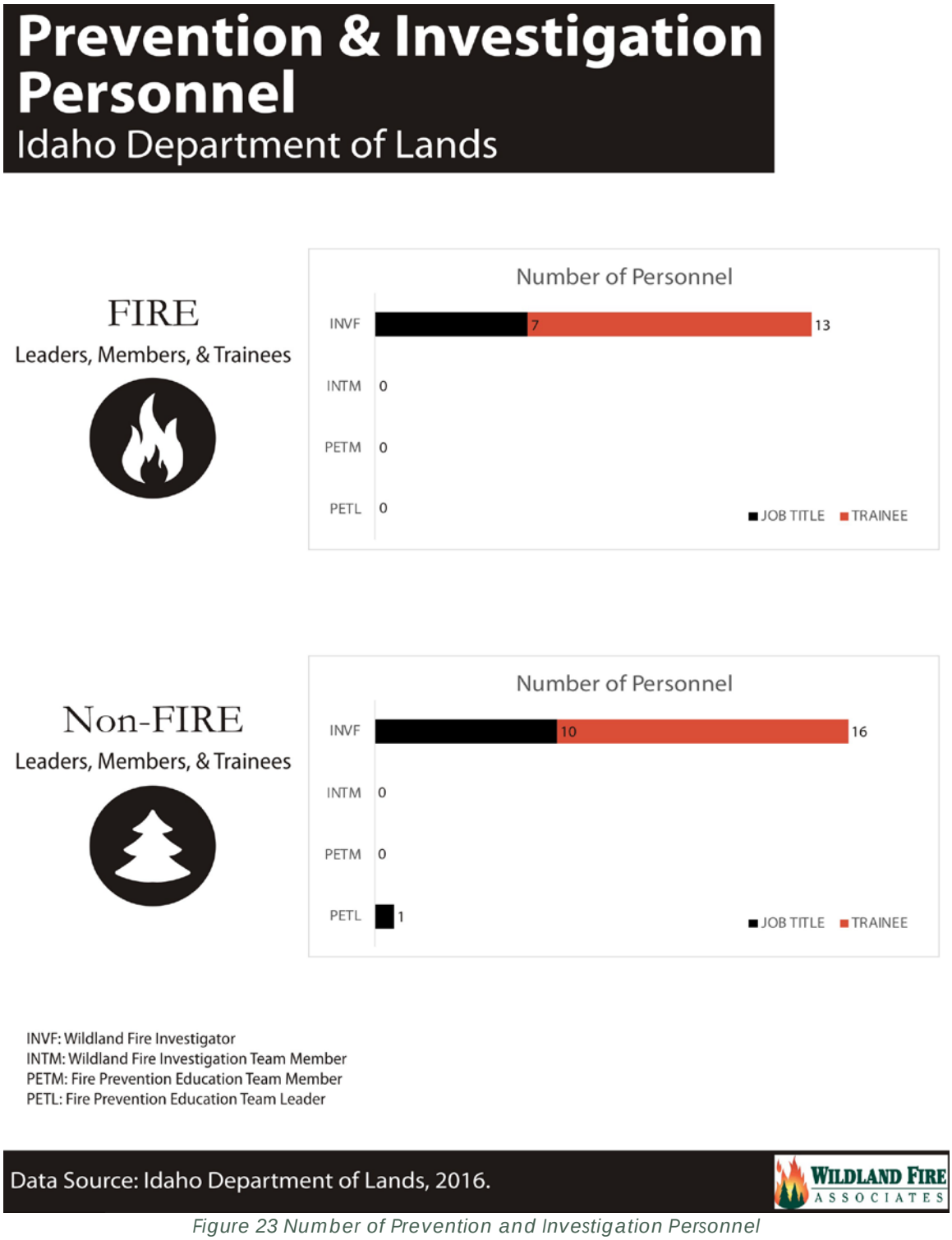


Figure 23 Number of Prevention and Investigation Personnel

Wildland Fire Investigator skills and qualifications are adequate. There is a need to further develop skills and qualifications at the Fire Prevention Education Team Leader level.

Staffing

With the exception of Craig Mountain, Maggie Creek, and Southwest, each district is staffed with a Fire Warden and Assistant Fire Warden providing Duty Officer coverage, and a base complement of nine firefighters providing seven-day staffing for two engines. Of the nine firefighters on each district, three have eight-month appointments including benefits, three have five-month appointments, and three have three-month appointments.

Craig Mountain, Maggie Creek, and Southwest are staffed with a Fire Warden and two Assistant Fire Wardens that provide Duty Officer coverage. Based on a significantly higher fire workload, Craig Mountain and Maggie Creek each have a base complement of twelve firefighters providing seven-day staffing for three engines. Of the twelve firefighters on each district, four have eight-month appointments including benefits, four have five-month appointments, and four have three-month appointments. Each district has the ability and flexibility to develop their specific hiring and staffing plans.

There are two state-wide booster crews, each with six firefighters. One crew is located at the Southwest Area in Boise, while the other is located at Clearwater-Potlatch Timber Protective Association (CPTPA) in Orofino. IDL has the discretion to move these booster crews where needed based upon fire starts and workload. These crews are configured with two firefighters with eight-month appointments including benefits, two firefighters with five-month appointments, and two firefighters with three-month appointments. The Boise booster crew is configured more like an Engine Module, and the Orofino crew is configured more like an Initial Attack Module.

Overall, the district staffing is sufficient for initial attack. They are lean, professional, and mission focused, but they have limited reserves. Each district developed a Fire Preparedness Staffing and Action Guide to retain firefighting resources beyond normal duty hours and to order needed firefighting resources. This is done to boost their initial attack capabilities and maintain staffing when there is a high probability of ignitions, imminent threat of thunderstorms, and/or a frontal passage.

These guides allow the Fire Wardens to preposition initial attack firefighting resources or maintain a taskforce beyond normal duty hours. Prepositioning firefighting resources in the right place at the right time is paramount to executing decisive and successful tactical actions.

Bureau-level staffing is adequate for normal day-to-day initial attack activity, and is capable of providing some support for Type 1, 2, and 3 incidents. At the higher Preparedness Levels, 4 and 5, the Bureau staffing capabilities are limited, and require additional resource support to meet the Mobilization Guide staffing plan. Given that IDL has a relatively small Bureau staff, it is difficult for IDL to be responsive to the Northern Rockies and Great Basin Multi Agency Coordination

(MAC) Groups, especially when they are activated simultaneously and have the expectation that IDL will participate.

The Fire Management Bureau Chief is presented with significant challenges when providing District and staff oversight while maintaining meaningful dialogue with the geographic areas. Recently, staff changes have been occurring frequently, and staffing shortages are being addressed and filled as quickly as possible. The focus of addressing anticipated staffing shortages should include the retention and management of corporate knowledge. Many recently hired individuals have come from outside IDL and do not have the corporate knowledge. This results in additional time needed to become familiar with IDLs policies, procedures, and organizational structure.

Without exception, leadership at the bureau, area and district levels is dedicated, professional, and committed to IDLs mission. All levels of the organization continue to have focused discussions on their strengths and weakness, and are developing solutions to move the organization forward (e.g., McCall After Action Review's in 2015 and 2016).

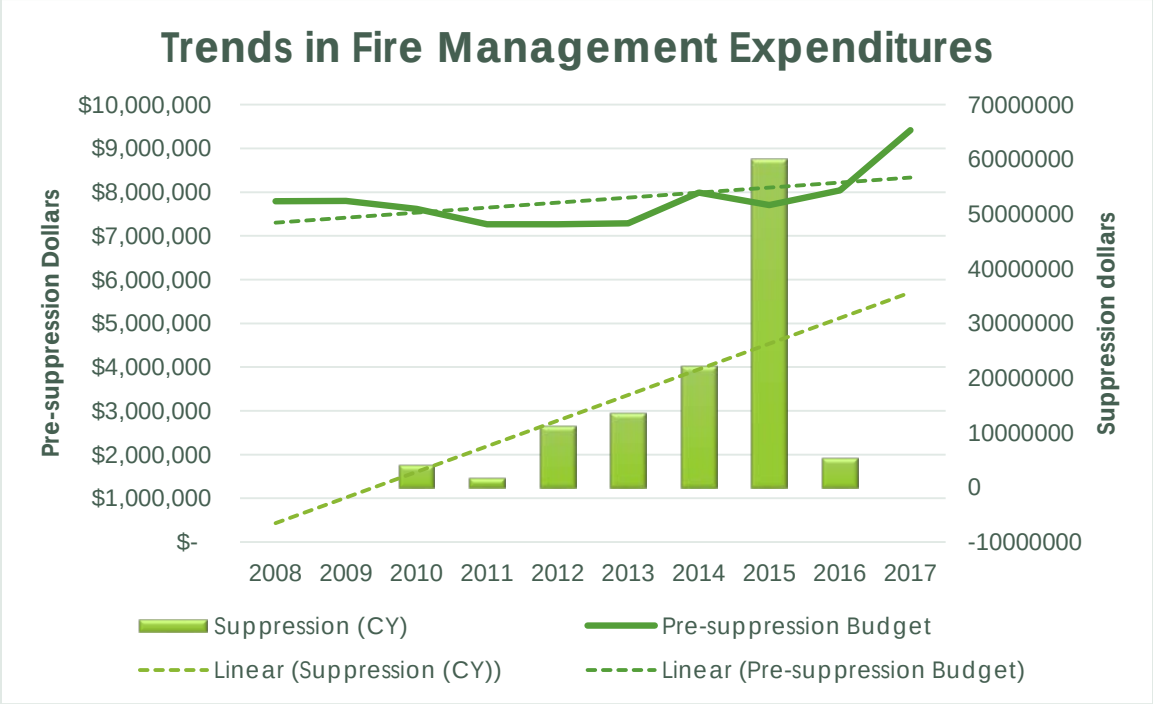
Budget

In 2009, IDL's fire program was subject to a significant budget reduction that resulted in the loss of five to six positions. Subsequently, a budget adjustment was required to maintain the capabilities and effectiveness of the IDL fire organization. From 2009 to 2015, pre-suppression funding has been static, at roughly $8 million, as suppression costs have risen (Figure 24).

It appears that pre-suppression funding and allocation of firefighting resources have become routine processes, without benefit of foundational modeling and ground-truthing that would capture changes in workload.

The budget request process was adjusted after the 2015 fire season when the Idaho legislature approved the addition of $917,000 to the IDL fire budget. A one-time allocation of $150,000 was given to IDL for a fire program review, and the remaining $767,000 budget enhancement is a permanent increase to the base budget. The budget enhancement has been used to upgrade some positions, upgrade a helicopter from Type 3 to Type 2, and include a pay increase for all firefighters.

Figure 24 Trends in Fire Management Expenditures



Findings and Recommendations

Finding:

- Advancing an employee from a Firefighter 2 (FFT2) to a qualified Firefighter 1 (FFT1)/Incident Commander Type 5 (ICT5) can take at least five years and an initial investment of $29,375.00. Advancing the same employee from a FFT1/ICT5 to a qualified Incident Commander Type 4 (ICT4) takes approximately an additional five years with an additional investment of $174,790.00. To advance the employee from ICT4 to a qualified Division Group Supervisor (DIVS) takes an additional six years with an additional investment of $233,423.00. In summary, advancing an employee from an entry level FFT2 to a qualified DIVS requires IDL to invest $437,588.00 in wages and 16 years of employment (Maggie Creek Employee Costs from Date of Hire to Divisions Group Supervisor). [34]

Recommendations:

- The Fire Bureau Chief, Fire Training/Safety Program Specialist, and Fire Wardens need to continue to refine the fire training plan(s).
- Develop opportunities and avenues to increase individual qualifications in a timely manner, such as targeting a period of three years to move from

[34] Data from IDL Fire Wardens, Maggie Creek Employee Costs from date of hire to DIVS

FFT2 to a qualified FFT1/ICT5. If IDL could develop a plan based upon a three-year training time frame to increase qualifications, the potential savings would be $174,500.00 per employee over a 10-year horizon as opposed to the current 16-year period to develop from FFT2 to DIVS. The long-term goal should be to shorten the time it takes to become qualified at one level and move to the next in order to build depth in the IDL fire organization more rapidly. This applies to all levels of the fire organization, from Command and General Staff to the Prevention and Investigation level.

Findings:

- Districts have limited staffing and reserves. They rely on Area and District foresters, as well as federal support, for any situation beyond more than one or two Initial Attack incidents.
- Fifty-seven percent of the Lands Bureau or Lands Program staff, 52% of the Fire Wardens and Assistant Fire Wardens, and 20% of the Lands Area Managers have been in their current position for 2 years or less (Active Employees, Current Position, and Classified Date Started).
- A static budget makes it difficult to maintain an organization when there is clearly a need to build depth in the organization.

Recommendations:

- Continue to use the Fire Preparedness Staffing and Action Guide to meet the objective of suppressing 94% of fires at 10 acres or less.
- Ensure employees have the support, training and opportunities to be successful in their respective positions.
- Use the Idaho Fire Management Analysis System (IFMAS) to identify a baseline budget, type, and mix of firefighters, engines and aviation assets for the organization. Have the Fire Wardens Group ground truth the baseline budget to determine the appropriate location of the firefighting assets, and identify the most efficient level (MEL) to fund the needed firefighting assets. The difference between the baseline budget and MEL should define a budget enhancement request.
- To staff the pre-suppression and suppression recommendations, it is recommended that IDL convert the two Booster Crews to a 20-person Type 2 Initial Attack Crew, consider upgrading some of the Resource Boss positions from 1385 hours to permanent full time positions. Further explanation for the budget request in located in Chapter 6, Suppression, and Chapter 13, Recommendations.

Finding:

- At the higher Preparedness Levels (4 and 5), the relatively small bureau staff can find it challenging to be responsive to both the Northern Rockies

and Great Basin MAC Groups. The result of this challenge is that IDLs needs may be overlooked unless there is someone present to advocate for IDL suppression priorities.

Recommendations:

- In order to meet the demands at higher Preparedness Levels, we recommend that IDL develop a position description for a Deputy Fire Bureau Chief, fill the position, and share the Fire Bureau Chief responsibilities with incoming person. Cost to IDL would be $**86,000.** (Further discussion is located in Chapter 6, Suppression, and Chapter 13, Recommendations.)
- Follow the Mobilization Guide Staffing Plan, and at the higher Preparedness Levels 4 and 5 have individuals identified that can act on behalf of the Fire Bureau Chief. Before fire season, share the names and contact information with the Northern Rockies and Great Basin Geographic Areas.

Chapter 6 Suppression

Initial Attack

The *Wildland Fire Incident Management Field Guide* defines initial attack as "the actions taken by the first resources to arrive at a wildfire or wildland fire use incident. Initial actions may be size up, patrolling, monitoring, holding actions, or aggressive Initial Attack."[35]

IDL Bureau of Fire Management Fire Mobilization Guide directs the Areas, Districts, and Associations (A/D/A) "to provide an aggressive initial attack force able to take safe, effective action on fires."[36] The Guide's Initial Attack standards are:

1. Provide initial attack capability to control ignitions to 10 acres or less, 94 percent of the time.
2. Plan for the use of A/D/A and statewide contingency resources when weather conditions or fire occurrences exists that might over-commit the initial attack ability to control additional ignitions.
3. In the event that initial attack and contingency actions fail, mobilize sufficient firefighting resources to control the incident before the end of the burning period the following day.[37]

Based upon interviews, employees clearly understand the standard. On more than one occasion employees made the comment that the standard is to "keep 94 percent of the fires at 10 acres or less." Table 4 and Figure 25 are based upon IDL fire data from 1987 to 2016. From 1987 to 1996, IDL was successful in achieving the 94 percent initial attack standard 7 out of 10 years (70 percent decadal success rate). From 1997 to 2006, IDL was successful in achieving the 94 percent initial attack standard 9 out of 10 years (90 percent decadal success rate). From 2007 to 2016, IDL was successful in achieving the 94 percent initial attack standard 3 out of 10 years (30 percent decadal success rate). Even though the Initial Attack success rate dropped over the last decade, IDL remains mission focused, and they are efficient and effective in achieving decisive results.

[35] National Wildfire Coordinating Group, PMS 210, April 2013, p. 17.

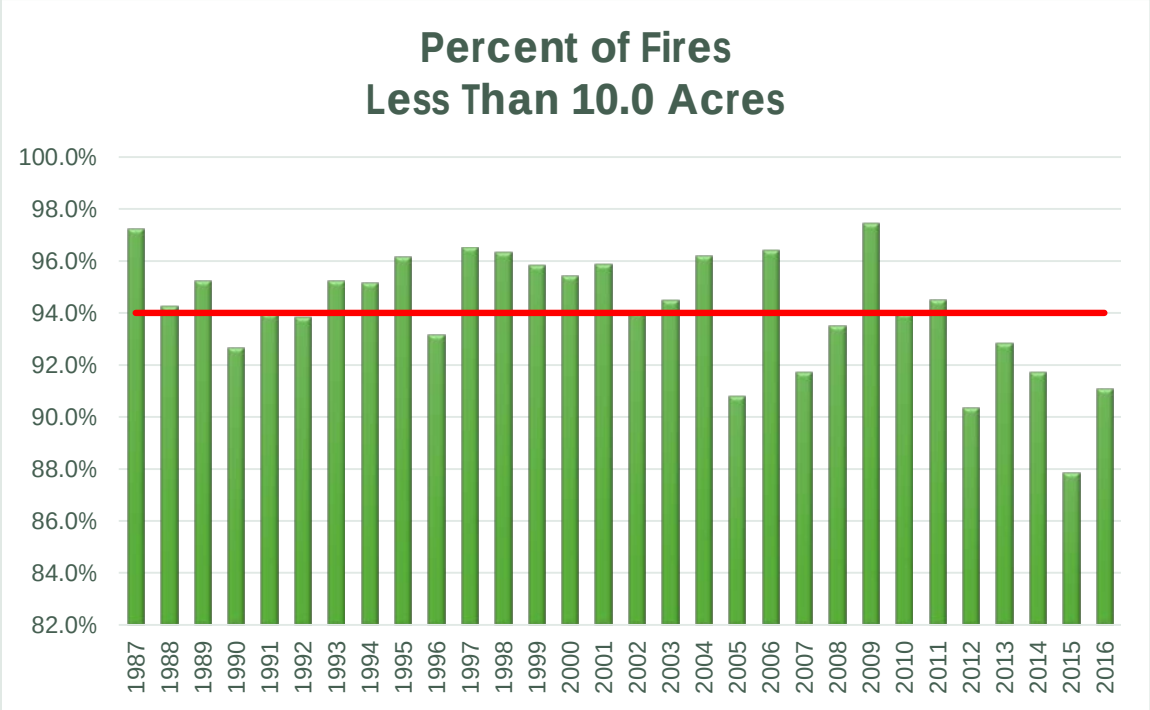
[36] Fire Mobilization Guide, Chapter 10 – Policy, Objectives, and Standards of Protection, p.6.

[37] Ibid, p.9

Table 4. Initial Attack Table by Year

Year	Number of Fires	Number of Fires Greater than 10.0 Acres	Percent Less Than 10.0 Acres
1987	404	11	97.3%
1988	365	21	94.2%
1989	526	25	95.2%
1990	396	29	92.7%
1991	465	28	94.0%
1992	488	30	93.9%
1993	210	10	95.2%
1994	937	45	95.2%
1995	288	11	96.2%
1996	352	24	93.2%
1997	258	9	96.5%
1998	356	13	96.3%
1999	407	17	95.8%
2000	308	14	95.5%
2001	410	17	95.9%
2002	320	19	94.1%
2003	362	20	94.5%
2004	292	11	96.2%
2005	228	21	90.8%
2006	446	16	96.4%
2007	351	29	91.7%
2008	247	16	93.5%
2009	352	9	97.4%
2010	183	11	94.0%
2011	255	14	94.5%
2012	187	18	90.4%
2013	322	23	92.9%
2014	351	29	91.7%
2015	321	39	87.9%
2016	168	15	91.1%

Figure 25 Initial Attack Success Rate by Year



Extended Attack

Extended Attack is defined as "the suppression activity for a wildfire that has not been contained or controlled by initial attack or contingency forces, and for which more firefighting resources are arriving en route, or being ordered by the Initial Attack Incident Commander."[38]

Beyond initial attack, IDL has limited firefighting reserves to sustain any type of momentum for Extended Attack or large fire incidents. Based on the interviews and additional discussions, there is concern that some firefighters may be functioning beyond their capabilities and qualifications in the at-risk and rapidly evolving environment during these situations. From 2007 to 2016, IDL Initial Attack firefighting resources capabilities were exceeded roughly 8 to 9 percent of the time.

Incident Management Teams

The state of Idaho is located in two Geographic areas, defined by "a boundary designated by governmental agencies (wildland fire protection agencies) within which they work together for the interagency, intergovernmental planning, coordination, and operational leadership for the effective utilization of emergency management resources within their areas."[39] The northern portion of

[38] National Wildfire Coordinating Group, PMS 210, April 2013, p. 23

[39] https://www.nwcg.gov/glossary/a-z#Geographic_Area

the state is located in the Northern Rockies Geographic Area, and the southern portion of the state is located in the Great Basin Geographic Area. Each one of the Geographic Areas maintains Type 1 and Type 2 Incident Management Teams.

Currently, the Northern Rockies Geographic Area Coordination Center (GACC) supports:

- two Type 1 Incident Management Teams (IMT),
- six Type 2 IMTs including the Eastern Area Type 2 IMT and
- one Wildland Fire Use Management Team.

The Great Basin GACC supports:

- two Type 1 IMTs and
- five Type 2 IMTs

Between 2006 and 2016, IDL experienced wildfire incidents that required them to host two Type 1 IMTs and 19 Type 2 IMTs. Based upon the current use, the assumption can be made that IDL will mobilize an average of two IMTs per year.

Based upon the respective area and team roosters, IDL has 17 employees participating on Northern Rockies IMTs, and two employees participating on the Great Basin IMTs. Most of the employees work in unit support positions, such as Finance and Logistics, with one employee in the Operations Section. IDL team participation is commensurate with their use of IMTs.

The Type 3 Teams are another valuable resource used by IDL. There two standing Type 3 Teams hosted by Coeur d'Alene Dispatch Center. Grangeville Dispatch Center utilizes a rooster and could potentially support one Type 3 Team depending upon employee availability. Payette Dispatch Center utilizes a Type 3 Plan, and could potentially support one Type 3 Team depending upon employee availability. Boise Dispatch Center utilizes a rooster and could potentially support one Type 3 Team depending on employee availability.

The standing Type 3 Teams hosted by the Coeur d'Alene Dispatch Center are staffed by approximately nine IDL employees with support for additional positions coming from the USFS and local fire departments. A Type 3 team was activated twice in 2016 and six times in 2015. The remaining dispatch centers struggle to support Type 3 Teams, especially at Preparedness Levels 4 and 5.

In 2015 IDL made the commitment to have Line Officer presence and representation on all Type 1 and 2 incidents that threaten IDL jurisdiction or protection. Based upon interviews, Line Officer representation with the assigned IMTs has been excellent.

IDL also made a commitment to participate with the Great Basin MAC Group, and the Northern Rockies MAC Group. However, interviews revealed that representation and participation on the MAC Groups has been inadequate.

There appears to be many complicating factors, including the fact that IDL is located in two different Geographic Areas which potentially leads to IDL representatives needing to be present in each MAC Group. Participation becomes even more complex, during periods of elevated Preparedness Levels (4 and 5) when competition for firefighting assets is high and when IDL is hosting IMTs.

Effectiveness

Firefighter and public safety is held in the highest regards by all IDL employees and emphasized at the District, Area and Bureau levels. However, interviews revealed that fire managers realize they are operating on the edge of their capabilities during periods with multiple ignitions, extended attack and long duration fire seasons, such as 2015. Adding to the complexity of this situation is the high level of turnover in leadership positions at the Bureau and District levels. The turnover has created some confusion regarding agency protocols, procedures and operations within IDL. Roles, responsibility and accountability are not clearly understood at the different levels. This makes it difficult to have the on-the-ground flexibility to adjust to a given and/or changing situation, whether it's a single fire or prepositioning additional firefighting resources for the next incident.

Managers felt they were prepared to react to a serious injury or fatality. The IDL protocol was utilized during the summer of 2016 for an on-duty death. The response was very professional.

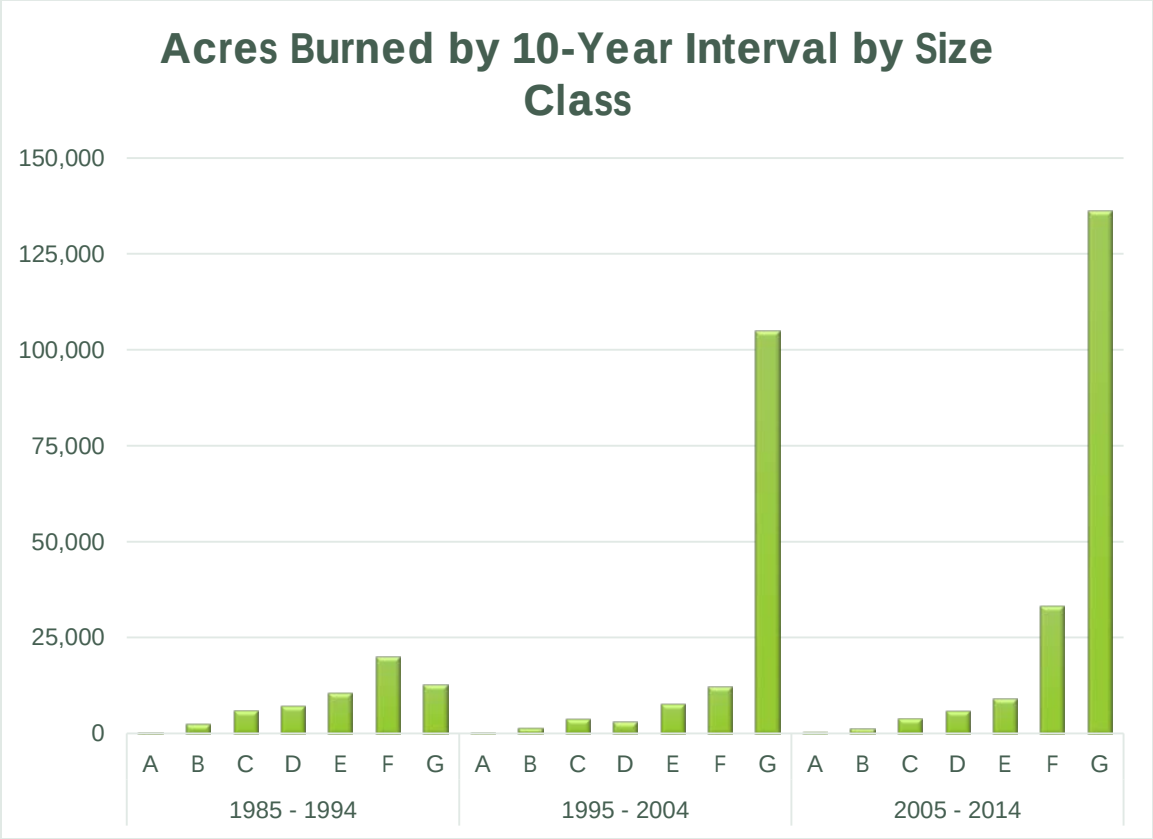
Interviews also identified suggestions for the Public Information Officer (PIO) function, which already has highly motivated and effective employees who are developing and testing protocols to improve the efficiency of this important function. These suggestions included:

- The need to develop a decision and communication protocol for the establishment, revision, and termination of fire restrictions as the fire season evolves, to ensure duty officer PIO's are notified and can transmit this information quickly to the media, stakeholders, and public.
- The continuing development of an expanded list of IDL employees who are available to respond quickly as PIO's as wildfires increase in number, location, and size around the state throughout the fire season.
- In support of the development and use of such a list, someone needs to be designated to organize and manage it, much as fire operations step-up plans are developed and used by duty officers as fire activity escalates.
- The need to reach out to the media more regularly with fire information about the IDL fire program, such as its preparation for an upcoming fire season, the work it does with counties on wildfire risk reduction, and many other aspects of the program, much as CAL FIRE does for California, for example. This would result in a more prominent IDL presence than

currently exists within the Idaho interagency fire management community with regard to public education and information.

All of IDLs fire organization and Area Managers have an excellent understanding and appreciation for the mission specific to cost containment and resource values. Everyone understands that if you need firefighting resources that you are to order them. When the resource is no longer needed, release it. All are doing a professional job of managing Initial Attack resources.

Figure 26 Acres Burned by 10 Year Intervals by Size Class *(A: 0.00-0.25 acres; B: 0.25-9; C: 10-99 acres; D: 100-299 acres; E: 300-999 acres; F: 1000-4999 acres; G: 5000+)*



Using IDL fire data, it is clear there has been a significant increase in fire size over 1,000 acres and acres burned per decade (Figure 26). However, during the same time period, the decadal number of fires has decreased by roughly 40 percent. This increased number of acres burned can be attributed to the fires burning in the periodic, mixed severity fire regime, and appearing to be burning on the lethal end of this regime. This pattern has been repeated over the last two decades, and will continue to be repeated over the course of the next decade, and fire footprints will become even larger.

IDL agency administrators and fire managers may find they do not have the knowledge, skills, abilities and firefighting resources to manage these larger wildfires for an extended period of time. More at-risk communities will experience the direct effects of large fires and firefighters will be exposed to hazards and risk for a greater length of time.

As displayed in Chapter 1, Figure 2, Trends in Fire Management Expenditures, there has been a steady increase in suppression expenditures. Combined with the increase in acres burned, IDL will continue to experience a marked increase in expenditures over the course of the next decade.

Findings and Recommendations

Findings:

- From 2007 to 2016, IDL was successful in achieving their objective of successful initial attack on 94 percent of wildfires 3 out of 10 years – a 30 percent decadal success rate.
- Initial Attack firefighting resource capabilities were exceeded approximately 8 to 9 percent of the time, and there are limited firefighting reserves to sustain momentum for Extended Attack or large fire incidents. This translates to a low frequency yet very high-risk environment.
- Dispatch Centers struggle to mobilize Type 3 Incident Management Teams, especially at Preparedness levels 4 and 5 when demand is the greatest.

Recommendation:

- Use IDLs two Booster Crews as the basis for a Type 2 Initial Attack crew to be used at the discretion of the Bureau. The crew configuration would be a self-contained, readily available ICT-3 organization, or 3 Initial Attack modules with additional overhead. The crew could be broken down into four modules, and provide the necessary supervision and oversight to mobilize four 20 person prison crews. The Type 2 Initial Attack crew aligns with IDLs successional plan to develop firefighters and increase the capacity of the Type 3 Teams, and would provide an excellent training platform to enhance qualifications and build depth in the IDL fire organization.

Cost used to develop enhanced budget request for the 20-person Type 2 Crew is in Table 5.

TABLE 5 TOTAL COST FOR THE 20-PERSON TYPE 2 CREW

Position	Qualifications	Cost
Crew Superintendent	ICT-3 and DIVS	$65,000
Crew Assistant Superintendent	DIVS (t)	$58,000
3 Squad Leaders	STCR	$125,000
15 Firefighters	FFTR 1 and 2	$156,000
Sub Total		$404,000
Existing Booster Crews		($188,000)
Enhanced Budget Request		**$216,000**

- We also recommend that some District Fire Resource Boss positions be converted from 1385 hours to permanent full time to improve retention of employees and enhance successional opportunities within the organization. The cost for this upgrade is **$459,000**.

The entire budget request for this recommendation is **$675,000.**

Finding:

- IDL representation and participation on the Northern Rockies and Great Basin MAC Groups has been inadequate.

Recommendation:

- It is recommended that IDL hire a Deputy Fire Bureau Chief to help manage the fire suppression workload. This position is especially critical during very busy fire seasons when the Preparedness Levels are at 4 and 5. The cost to fill this position is estimated to be **$86,000.**

Finding:

- There has been a significant increase in fire size over 1,000 acres, acres burned, and suppression expenditures, while the number of fires has decreased by roughly 40 percent.

Recommendation:

- Recommend development of a pre-attack plan for the districts. The plan should identify natural and man-made features that will slow or stop an advancing large fire, and describe the tactical options associated with those features. The cost for this will be **$65,000**.

Total Budget Enhancement **$826,000**

Chapter 7 Aviation

Current Configuration

The IDL aviation program meets the criteria for a complex aviation organization based on the following:

- IDL contracted aircraft fly an average of over 1,000 hours annually, in a 2 ½ to 3-month period.
- Aircraft bases are assigned over the state-wide area, with the farthest base 275 miles from the aviation management duty station in Coeur d'Alene.
- The area of operations includes a wide range of cooperating agencies. Aircraft can be assigned on a daily basis depending on anticipated or actual resource needs. Aircraft will leave their home base for extended periods because they have been reassigned to meet needs in another part of the state.

The aircraft dispatch area includes a number of units for IDL, seven dispatch areas within the zones of three Dispatch Centers that serve as the home base for aircraft. The three dispatch centers are Coeur d'Alene, Grangeville and McCall. Each dispatch center has unique Mishap Response Plans, Air Hazard Maps and radio frequencies. A further increase in the complexity of air operations is caused by IDL aircraft operating between and in two separate GACCs.

Airtankers are assigned at bases based on identified needs of IDL and cooperators. Management of the airtankers is provided primarily by USFS.

Oversight of the aviation program requires the Bureau Duty Officer and State Aviation Manger (SAM) to have multiple points of contact on a daily basis. Staffing is as follows:

- SAM has collateral duties in the areas of fire prevention and investigations. Investigations and aviation both are very critical, and the heavy workloads for both areas can occur during the same time periods.
- Helicopter Operations Specialist (HOS) is a new position added in 2016. HOS provides aviation expertise for the bureau, and provides Exclusive Use Helicopter Manager coverage and oversight for the helicopter program. Each of the two helicopters is assigned an Exclusive Use Helicopter Manager.

IDL provides seven aircraft to support the IDL mission and cooperator's response. The aircraft are as follows:

- Two Type II medium helicopters on contract from July 1 to September 15, with the ability to extend to September 27. The home base for the Type II helicopters is Coeur d'Alene, but one platform was assigned to Grangeville in 2016.

- One Amphibious Single Engine Air Tanker (SEAT) – Fireboss - based in Coeur d'Alene. The contract period is July 1 to September 8, with the ability to extend to September 27.
- Two AT 802F SEATs on contract from July 1 to September 8, with the ability to extend to September 27. The home base is in Grangeville, however, they were located in Lewiston in 2016 due to construction at the Grangeville airport.
- One AT 802F SEAT based in Coeur d'Alene. The contract period is July 1 to September 8, with the ability to extend to September 27.
- One AT 802F SEAT based in McCall. The contract period is July 5 to September 12, with the ability to extend to October 1.

Staffing

The aviation program has been able to recruit highly qualified Exclusive Use-qualified Helicopter Managers into the module leader positions. Beyond the module leader positions, crews include some first-year firefighters. There is high turnover within the crews.

Effectiveness

Based on interviews and personal observation, IDL employees in positions of aviation leadership, and in the Helicopter Module, demonstrated professionalism. They provide opportunities, such as work details, to gain professional experience and increase skills. They explore opportunities to help improve their program and to implement industry best practices.

During the interview process, the interviewers had an opportunity to interact with the Grangeville Helicopter Module. The module was found to be highly professional, the aircraft correctly configured for initial attack and incident support operations. The crew demonstrated a thorough knowledge of their mission and how to support the field.

Findings and Recommendations

The findings listed below are not unique to IDL. These findings are common throughout other aviation programs that this team has reviewed, including programs administered by the NPS, USFS, and BLM.

General information:

- The IDL Aircraft Procurement process does a good job competing for high quality vendors that provide well-maintained equipment and skilled pilots.
- Short aviation contract periods, especially for helicopters, leave little time to prepare and train for fire season.

Finding:

- Aviation policy for IDL is currently located in the Mob Guide, FMH policy documents and SOPs. Having policy in so many different places makes it

difficult to update, and challenging for both internal and external users, such as Fire Wardens, dispatchers and cooperators, to locate all current policies and procedures for IDL aviation.

- A review of policy indicates that there are items that need to be updated, corrected, and/or put in place, such as the risk assessment for Hover STEP operations; and some of these items need to be approved at a higher level in IDL than the current practice.

The following IDL Aviation Policy documents were reviewed:

- IDL Mob Guide Chapter 80, Revised 6/1/2015, Prepared by Aviation & Fire Inv. PM, Approved by Chief, BFM
- IDL Mob Guide Attachments FMH 836, Fire Aviation Operations, 4/1/16
- Attachment 2, IDL Addendum to the Interagency Helicopter Operations Guide. March 2016
- Attachment 3, IDL Addendum to the Interagency Single Engine Air Tanker Operations Guide. June 2009
- Attachment 4 Authorization Memo Hover Exit Step, no initial date, Prepared by Fire Aviation Operations , 4/1/16 – AM, Approved by Chief BFM
- FMH 860 Fire Review, Incident/Accident Investigations, Revised 4/1/12, Prepared by Training & Safety Spec, Approved by Chief BFM
- IDL Aviation Operations OPM – no date – Authorization IDL Hover-Exit/STEP program Helicopter Operations – CDA Helitack Hover Exit – STEP – Power On Landings; Protocol, guidelines and Standard Operation Procedures.
- FMH 837 (Draft) Unmanned Aerial Systems 1/15/2016

Recommendation:

- IDL would benefit from development of a stand-alone Aviation Management Plan, to be reviewed annually prior to the fire season. The plan would include components from aviation plans used by other state and federal organizations in the interagency aviation community such as aviation guides, policies and SOPs. The final plan would be recommended by the State Aviation Manager, and approved at the minimum level of the Fire Bureau Chief, with higher risk missions, such as the Hover STEP program, signed at a level higher.
- The plan would be made available in both hard copy and on-line to be readily accessible to all users. The plan would include a checklist of who is responsible for updating each section of the plan. There are several good outlines for aviation plans developed by other states and federal agencies that could be used as templates.

Mishap Prevention, Investigation, and Response

Note: This topic is addressed in three different IDL policy documents: Chapter 80 of the Mob Guide, FMH 836, Fire Aviation Operations, and FMH 860 Fire Review, Incident/Accident Investigations.

Recommendations:

- IDL should consider adopting a risk assessment tool to review the overall effectiveness and safety of the aviation program, to include SOPs for pre-mission planning (i.e., go-no-go).
- IDL should consider reviewing the risk assessment program one year after implementation for any recommendations for quality assurance, i.e., are the new policies in place, and to ensure that the recommended changes/actions were implemented.
- All policy documents should include signature blocks and approval for the following: Prepared by/Recommended by/Approved by, especially on high risk operations. The Bureau has responsibility for determining the "Acceptable Risk" for their employees.

Finding:

- In Chapter 80 of the IDL Mob Guide, Item 7, Aircraft Accidents, Incidents, and Hazards**,** A. 4 states that IDL will follow the procedures in FMH 860 Fire Review, Incident/Accident Investigations.

  FMH 860, as currently written (most recent version 4/1/2012), is not adequate for all phases of providing direction or policy for Aircraft Incident/Accident Investigations. The procedures in FMH 860 are directed almost exclusively to ground operations, and, in the event of an aviation mishap involving IDL contract aircraft, would not give IDL the opportunity to participate as liaison with the National Transportation Safety Board (NTSB) during the investigation.

Recommendation:

- Update FMH 860 so it provides clear, concise direction for how investigations will be conducted. IDL should strongly consider a partnership through formal agreement with the USFS or Department of Interior – Office of Aircraft Services (DOI-OAS) to ensure that IDL has a trained, qualified Air Safety Investigator to assist them in navigating the complexities of interactions with the Federal Aviation Administration (FAA), NTSB, and other cooperators. For aviation accident investigations that

occur on IDL jurisdiction or involve IDL employees, this would give IDL the ability to participate in an official capacity as a liaison.

Finding:

- The SAFECOM system is identified throughout IDL documents and guides, but is under-utilized in the IDL Fire Program. A review of the SAFECOM system indicates that IDL has not participated in this program recently.

Recommendation:

- The IDL Aviation Safety Program should identify how the SAFECOM System is currently working for IDL, how aviation managers want it to work, and what it will take to get there. An effective SAFECOM program requires that all SAFECOMs be sent to the appropriate Safety Manager who is responsible for providing corrective actions, then making the SAFECOM available to those who need the information. This allows those working in the aviation program to read the facts of the incident and see what corrective actions have been taken. This process needs to happen in a timely manner so that 'lessons learned' can be applied as quickly as possible. Safety Managers can also examine potential trends in IDL SAFECOMs, as well as those of interagency cooperators, to alert field crews to any significant issues that are taking place.

  The SAFECOM process is another area where a formal agreement with a federal agency could be very helpful. Federal Inspector Pilots and Maintenance Inspectors can be included on the SAFECOM mailing list, and can identify potential issues that most Aviation Officers do not have the experience to recognize. These SAFECOMS can then benefit from more experienced personnel assisting with corrective actions.

Note: Accomplishments towards this goal – In December of 2016, IDLs Aviation Manager met with DOI/OAS Safety Division and was given system access to IDL SAFECOMs, with the ability to provide corrective actions and make them public.

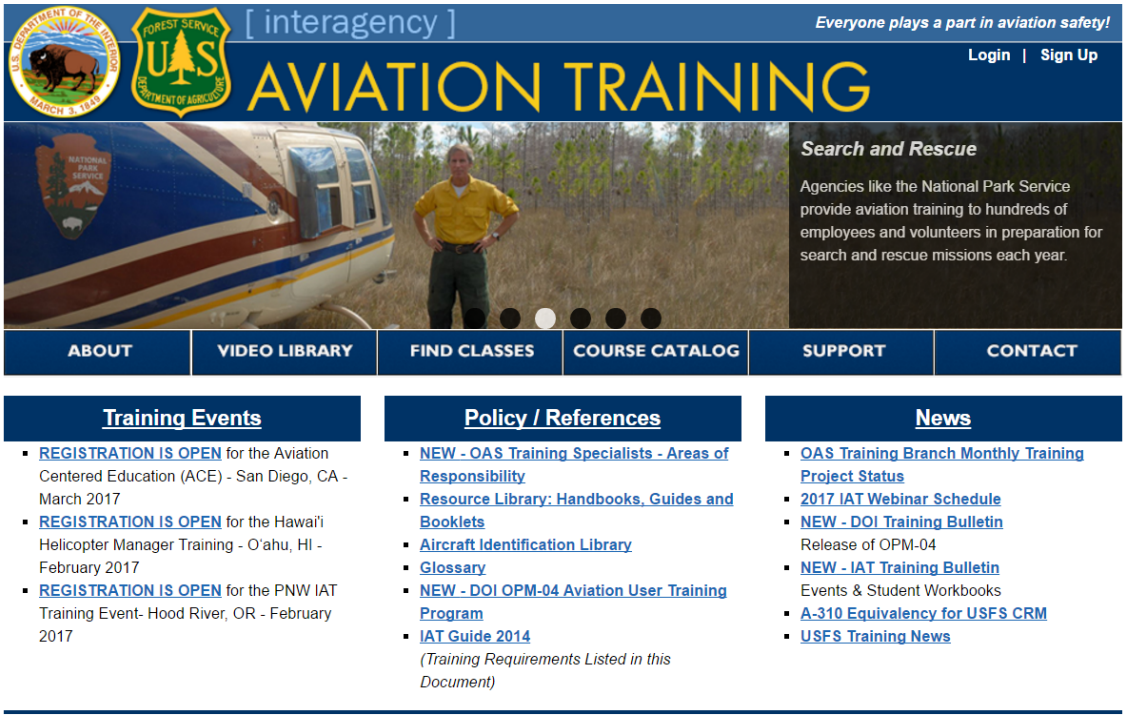
Training

Finding:

- IDL employees have participated in online training available via the Interagency Aviation Training (IAT) system. Historically, the Aviation Manager on the Idaho Panhandle National Forest had access to the IAT system and assisted with updating and managing IDL records. That individual has retired, and IDL does not currently have the ability to manage their IAT records.

Recommendation:

- IDL needs full participation in the IAT on-line records and training, including the ability to manage and maintain IDL records, and identify required training by position. IAT WEBSITE address is https://www.iat.gov/.



Operations

Finding:

- Chapter 80 Aviation of the Mob Guide, 5 Aircraft Management needs to be revised and updated. F and G, located in Chapter 5, reference the addendums that keep IDL from being fully compliant with interagency cooperators.

Recommendation:

- Update IDL Mob Guide Addendums 2 and 3 to bring IDL into compliance with federal cooperators.

Finding:

- FMH Chapter 80 IHOG Supplement 2, Vendor Approval 3 States that non-carded helicopters and pilots may be utilized under certain situations.

Recommendation:

- Remove the language from Supplement 2. This is red-flag language that doesn't really make sense in today's interagency aviation operations. In federal policy, to deviate requires a risk assessment be completed identifying additional risk, and the approval of the risk assessment occurs at the appropriate level in the organization (for example, an individual who has authority to deviate from policy in emergency operations). These decisions are made for the protection of human life and very rarely property.

Finding:

- The Hover/Exit STEP Program is a High Risk Operation.

Recommendation:

- We highly recommend that the Hover/Exit STEP program approval reside at the Bureau level. The current IDL Helicopter Operation Protocols and Procedures Guide is in-depth and well-written. We highly recommend a Safety Management System (SMS) review of the program. An SMS review will provide a detailed analysis of the risk inherent in this mission, and can provide a solid foundation for the Aviation Safety Program. The BLM Hover STEP program is a good model. Their program has approved STEP in a limited capacity and has completed a full SMS review of the program. There are also additional programs that can share best practices, including the National Science Foundation (NSF) Antarctica mission.

Finding:

- Administrative support for SEAT Management remains with the USFS Tanker Base managers at the designated base for the aircraft, regardless of where the SEATs are located.

Recommendation:

- Designate federal Base Managers in the local area as Project Inspectors (PI) to streamline the process.

Finding:

- IDL does not require a SEAT Manager for reloading from remote bases if they are returning to their primary base at the close of business. This is identified in SEAT/AWS Guide as well as Mob Guide Chapter 80 Attachment 3.

Recommendation:

- Recognizing that qualified SEAT Managers are difficult to find, we recommend that IDL consider having a SEAT Manager on location or en route, when available, to meet the interagency standard. An on-site SEAT Manager also adds an additional level of oversight and safety to remote base operations.

Finding:

- IDLs Policy for Aircraft Return to Service is as follows: "In the event an aircraft becomes unavailable due to a maintenance issue, it is the contractor's responsibility to ensure that any maintenance is completed correctly in accordance with Federal Aviation Administration (FAA) Regulations. A certified aviation maintenance technician will complete the necessary work and make the appropriate entry in the aircraft log book. Major repairs or alterations will require an FAA Inspector's Authorization."

Concern about this policy was expressed during interviews with both IDL employees and cooperators. As a rule, IDL aviation personnel, along with their interagency partners, do not have professional pilot and mechanic backgrounds.

This IDL policy does not apply when IDL aircraft are on federal incidents (See DOI/USFS Letters of Authorization).

Recommendation:

- Aircraft Return to Service procedures should be re-evaluated. We recommend that IDL review federal contracts, which allow for aircraft to be returned to Contract Availability by the mechanic signing off the maintenance in the log book without additional approval. However, when major repairs or alterations take place the next level of expertise (agency aircraft maintenance inspector) is involved. SAFECOMs are

submitted, which allows for identification of trending issues and potential sharing of critical flight safety information. Given that federal inspectors are listed on all Regional SAFECOM notifications, they can contact managers if they see something of concern that may have been missed at the lower level.

- Additionally, an MOU or agreement with USFS or BLM would add an additional level of expertise that, when needed, would greatly assist the entire IDL Aviation Program, as it has the federal programs.

Finding:

- There is no evidence of IHOG, Appendix E Base Review for IDL helicopter program. This is an IHOG requirement.

Recommendation:

- Request USFS Helicopter Operations Specialist or BLM State Aviation Manager to provide a review. Have IDL aviation mangers participate in a USFS review for continuity.

Leadership and Program Oversight

Findings:

- The State Aviation Manager (SAM) is highly motivated and would benefit from additional experience and training to allow him to carry out the position responsibilities.
- Collateral duties of this position complicate the manager's ability to devote the time necessary to meet all of the responsibilities of the job.

Recommendations:

- IDL should consider conducting a workload analysis of the SAM position. Based on interviews and models from other state programs, the SAM should not be a collateral duty position.
- Evaluate potential sharing of duties with new Helicopter Operations Specialist position. Use Exclusive Use Managers to help draft aviation management planning and risk assessment documents.
- Develop an IDL Aviation Management Committee to participate in aviation program and policy development.

Chapter 8 Fire Equipment

IDL manages a great variety of fire equipment. Equipment includes larger investments such as engines, water tenders, and dozers; and smaller investments such as pumps, chainsaws, radios, computers, iPads, and Unmanned Aerial Systems (UAS). This chapter will focus on the equipment that requires larger capital investment, as well as acquisition and maintenance of information technology equipment.

Numbers

IDL has 30 engines, 3 water tenders, and 1 dozer without an operator. The engine fleet contains 2 Type 4 engines, 21 Type 5 engines, 6 Type 6 engines, 1 Type 7 engine. The water tenders are Type 2 water tenders. Table 6 (next page) outlines the distribution of the equipment statewide.

Engines

NWCG establishes standards for engines. The water capacity and minimum number of crew members per engine are as follows[40]:

> **Type 4** engines are classified as heavy engines with a large water capacity (minimum of 750 gallons), and a crew capacity of at least 2 crewmembers.
>
> **Type 5** engines are classified as initial attack engines on a medium duty chassis. A Type 5 engine has a water capacity of between 400 and 750 gallons, and carries a crew of at least 2 crewmembers.
>
> **Type 6** engines are also classified as an initial attack engine on a medium duty chassis. A Type 6 engine has a water capacity of between 150 and 400 gallons, and carries a crew of at least 2 crewmembers.
>
> **Type 7** engines are a considered to be multi-purpose engines to be used for patrol, mop-up, or initial attack. A Type 7 engine is a light duty vehicle with a water capacity of between 50 and 200 gallons, and carries a crew of at least 2 crewmembers.

IDL engines are staffed during the fire season with three people on each engine seven days per week, and water tenders are staffed with an operator on an as needed basis.

[40] USDA Forest Service Wildland Fire Engine Guide. Technology & Development Program. 5100 – Fire Management, October 2000.

Table 6 Number of equipment by type.

Area	Type 4	Type 5	Type 6	Type 7	Water Tender	Dozer
Priest Lake Area		1	1	1	1	
Mica Area		1	2			
Cataldo FPD		2	1		1	
Pend Oreille Lake Area		2				
Kootenai Valley FPD	1	2				
St Joe Area	1	1	1		1	1
Ponderosa Area		3				
Maggie Creek Area		2	1			
Craig Mountain FPD		3				
Southwest Area		4				

Capability

Overall, the capabilities, types, and maintenance of equipment are very good. IDL fire personnel are well-informed on the importance of having rugged equipment and keeping it maintained. The firefighters understand the importance of having good water handling equipment from pumps to extra hose, especially in light of the fuel types (timber and logging slash) where the fires occur. The water handling equipment from pumps to engines is essential to accomplishing IDLs fire protection mandate in an efficient manner.

The Equipment Committee evaluates what equipment is needed and makes recommendations accordingly. They are responsible for assessing the types of engines, as well as the number and mix of engines used in the field. They also evaluate new technology such as iPads and UASs, as well as equipment such as pumps and chainsaws. Requests from the field can be made directly to the Equipment Committee.

Dozers

As needed for firefighting, a dozer, operator, and transport (module) are obtained from loggers or other private contractors. Districts have indicated through the interview process that they could be more efficient in accomplishing their fire protection mandate with an IDL owned and operated fleet of dozers with operators. The concern expressed is that use of contract equipment is not always efficient due to contracting requirements and lag time resulting in delayed initial attack response. In 2007 or 2008, the Fire Bureau Chief completed an informal analysis of the existing dozer program. The analysis was based on the number of hours of dozer use per year, cost to the fire management program, and potential trade-offs such as upgrading and purchasing new engines. The analysis revealed that: (1) the IDL dozers were being used less than 100 hours

annually, (2) forestry resources used the dozers the majority of the time, and (3) fire management was paying for all of the use. Further analysis revealed that four engines could be purchased for the price of one high track dozer. Based on this analysis, the Fire Bureau Chief concluded the cost of the program could not be sustained or justified based on use.

Quality

IDL has a very good engine program. There is a statewide standard design for the Type 5 engine. The equipment shop in Coeur d'Alene purchases four-wheel drive trucks and assembles the slip-on attack module. The module includes the water tank, pump, booster reel, and cabinets. Allowing for the types of roads traveled, and the types and locations of the fires they have to fight, the Type 5 engine is suitable for most of the districts.

IDLs Type 4 and 6 engines, along with water tenders, are obtained through federal excess programs or they are designed and assembled in the equipment shop.

The Wildland Equipment Replacement Fund (WERF) has provided sustained funding to upgrade and replace engines and trucks on a regular basis. Based on the interviews as well as inspections by WFA, the type, number, and condition of the engines has improved significantly over the last five years.

Findings and Recommendations

Findings:

- The Equipment Committee is an excellent example of the field and Fire Bureau working together to identify equipment issues and resolve them in a timely manner.
- Engine module personnel are satisfied with the engine program. However, some employees would like to have additional options available, such as having the ability to upgrade to a Type 4 engine that would allow for an increased water tank capacity. Other employees would like the options of a diesel engine that would provide additional horsepower and improved mileage, or the double cab six-passenger truck so they can carry more crewmembers. These are examples of requests that engine module personnel have submitted or will submit to the Equipment Committee to be evaluated for potential changes.
- The majority of water tenders used by IDL for firefighting are provided by the fire service organizations (FSO). However, some districts do not have that option available and provide their own tenders.
- Other equipment such as chainsaws, volume pumps, Mark 3 pumps, fold-a-tanks, radios, and the exchange program were all sufficient in the support of the areas and districts.

Recommendations:

- Continue the Equipment Committee's issue identification and problem solving processes.
- Continue the constructive interaction between the field and Fire Bureau.
- Continue to challenge the Equipment Committee to explore future options, such as the number, types and mix of engines on the districts.

Findings:

- Contracting privately owned equipment, primarily dozers, is a cumbersome process and a burden for the Fire Wardens.
- The annual Idaho Cooperator Certification Form (ICCF) agreement with the Fire Service Organizations (FSOs) is a large workload, especially for the Eastern Idaho Area. This finding is based on several interviews.

Recommendations:

- Re-establish the Fire Business Committee and develop a charter to formalize this working group. Ideally, the committee should have seven members, consisting of four Fire Wardens or Assistant Wardens, one North or South Operations person, Fire Business lead from the Fire Bureau, and an Area Manager.
- The Fire Wardens and Fire Business Committee can work together to streamline and resolve equipment contracting issues. Use the *Actions Items* discussed in the *Fire Preparedness Staffing and Action Guide,* to identify when a local lowboy, dozer, and operator will be mobilized and placed on standby for initial attack.
- Continue to use the National Equipment Contract for extended attack and large fire management.
- Develop and establish a working relationship with the Northern Rockies and Great Basin Equipment Committees.

Findings:

- Acquisition and use of information technology equipment, including smart phones and tablets, has not been well coordinated.
- IDL has completed the initial test missions for the UAS program, which is still in the proof concept and operational program applicability stages.

Recommendations:

- Fire Wardens and Technical Services can work together to develop a plan to address and provide for the testing and purchase of new technology.
- Incorporate the use of the new technology, where appropriate, into IDL operations and protocols.

Chapter 9 Dispatch

This chapter evaluates the current structure of the IDL Dispatch Program, including discussions about the individual dispatch centers. Additional information about the Dispatch Program is located in Chapter 12, Interagency Agreements.

Current Structure of the IDL Dispatch Program

Interviews were conducted with personnel at the Level III Interagency Dispatch Centers in Coeur D'Alene, Grangeville, Boise, and McCall. The individuals interviewed at each center include USFS Dispatch Center Managers and IDL employees, when available. All employees demonstrated professionalism and expert knowledge of their operation. They were open to discussing opportunities for potential improvements in interagency operations. Dispatch center interviews included evaluations of funding and staffing provided by IDL to each center.

There are three additional interagency dispatch centers in Idaho. IDL does not have protection responsibility within the dispatch area of these centers, or provide direct funding or staffing support. No staff was interviewed at these centers. The centers are as follows:

South Central Idaho Interagency Dispatch Center (SCIIDC) is located in Shoshone. SCIIDC provides dispatch support for fire resources in the south-central part of Idaho, northeastern portions of Nevada and the northwest corner of Utah. The center employs a combination of 10 to 12 temporary and permanent Bureau of Land Management (BLM) and USFS personnel.

Eastern Idaho Interagency Fire Center (EIIFC) is a cooperative effort between the Idaho Falls District of the BLM and Caribou-Targhee National Forest. Facilities and resources are shared between the two agencies. EIIFC provides fire coordination on over 7.5 million acres of public lands, encompassing 21 counties within four states, including southeastern Idaho, southern Montana, western Wyoming, and northern Utah. Based upon interviews, EIIFC stated that 25% of their workload is in support of IDL or Fire Service Organizations (FSOs). As a result of the workload, EIIFC has indicated that funding would be welcome.

The Central Idaho Interagency Fire Center (CIC) is located in the Salmon-Challis National Forest Supervisors Office at the Public Lands Center in Salmon. CIC is an interagency fire and aviation dispatch office serving the USFS, BLM, Idaho Fish and Game, and IDL.

The IDL Dispatch Center model is complex, based on the following information:

- There is no standard model or formula for determining IDL contributions to dispatch centers. For some, IDL provides personnel without much additional funding. For other centers, IDL contributes funding, but no personnel.

- IDL participates in a number of dispatch centers that provide services for several cooperating agencies covering a large geographic area. Although this adds complexity for a State Duty Officer, there are major benefits from participating as a cooperator in the centers.
- IDL jurisdiction spans two (Geographic Area Coordination Centers (GACCs): Northern Region and Great Basin. From the standpoint of IDL Headquarters resource tracking, IDL participation on Multi-Region Coordinating Group (MRCG)/MAC groups can be a challenge. Participation on MRCG/MAC groups is an additional responsibility for a Duty Officer who is also required to stay current with resource availability and draw down within IDL.
- Use of pre-determined incident response, such as run cards, for IDL is not present in all centers.
- All dispatch centers may be responsible for tracking IDL aviation resources. Three centers serve as Home Base for IDL aircraft. Aircraft can be re-assigned on a daily basis depending on anticipated need or use. Reassignment and tracking can involve more than one dispatch center and GACC.
- When resources are assigned to an incident or moved to another location, Bureau Duty Officers and Dispatch Center Mangers can have multiple points of contact, such as other dispatch centers, Unit Aviation Managers, Tanker Base Managers, and IDL Duty Officers. This can be complicated. Protocols, such as information and update requirements, sometimes differ among contact points, and can be unique to each center and operating agreement.

Interagency Dispatch Centers

IDL participates as a cooperator in the following Interagency Dispatch Centers in the Northern Region GACC and the Great Basin GACC. Interviews were conducted at the following centers:

Northern Region GACC

Coeur D'Alene Interagency Dispatch Center

IDL and USFS provide personnel for this Dispatch Center. The facility is operate at or above capacity. The current location at the airport provides for ease of tracking aviation resources. However, there are plans to move dispatch into a new facility away from the airport in the next three years.

The highlights of the Coeur D'Alene Dispatch Center include the fact that there is a wealth of experience and knowledge of the local area among the staff. New dispatchers have brought high levels of experience. While positions were being filled, the local area successfully brought in highly skilled individuals to meet the needs.

A past challenge for this dispatch center includes that some positions had been filled with detailers that were not as experienced. The center addressed this issue by bringing in high-quality, competent individuals to fill the positions on a permanent basis. A second concern among those interviewed was that IDL employee pay and benefits are not commensurate with federal dispatchers in the center, which contributes to retention issues.[41] Additionally, the facility is somewhat outdated for the current and future workload.

Grangeville Interagency Dispatch Center

IDL and USFS provide personnel for this center. The facility has been recently updated, and individuals interviewed felt that the center has an outstanding set-up that makes it a great place to work.

The highlight for those interviewed was that an IDL dispatch position was added after the 2015 fire season.

Current challenges include the observation through the interviews that IDL dispatcher pay and benefits are not comparable with federal dispatchers in the center, which makes it hard for IDL to retain high quality dispatchers. In addition, there is room for improvement with communications between IDL Headquarters , such as Duty Officers, and local fire managers and Fire Wardens when resources are moved either to or from another dispatch area to meet IDL needs.

Great Basin GACC

Payette Interagency Dispatch Center – IDL/SITPA:

All employees at this Dispatch Center are USFS employees. The facility is funded by the USFS, with a lump sum from SITPA (which is provided by IDL) for staffing, materials, and facility costs .

Based upon interviews, the working relationship with IDL is great. SITPA is a full partner in the dispatch center after the 2016 agreement was put in place and additional funds were provided.

Those interviewed felt that many positive things have occurred including that IDL is included in run cards for response, and the new agreement is in place. The co-location of the IDL Bell 212 with Payette helicopters was a great opportunity for increased staffing of the aircraft and cross-training, and also increased effectiveness of the aircraft.

Boise Interagency Dispatch Center

The dispatch center is staffed with all federal employees. Funding is mostly federal, with some funding from IDL. The relationships within the dispatch center are good, with good participation from all involved agencies.

[41] Concern was expressed by both federal and state employees.

Highlights from the interviews include that IDL has good interagency partners. Run cards include IDL, BLM, and USFS, so the responses are interagency. The interagency Board Of Directors is very active and meets monthly. IDL has an office in the center, and an IDL Duty Officer is present in the center during high fire occurrence. Additionally, the IDL movement of aircraft and resources from the north to support fires in the southern part of the state was helpful.

Challenges discussed during the interviews included feeling that current contributions do not reflect the actual workload.

Findings and Recommendations

Finding:

- In centers where there are both IDL and Federal employees, there is a pay and benefit disparity that is leading to retention issues

Recommendations:

- We recommend that IDL review employee pay and benefits and make a determination on how to address the disparity. IDL should consider alternative incentives such as increases in appointment time, increases in benefits, additional training, and job flexibility to retain employees in these positions.

Chapter 10 Cache

The following discussion is based on interviews conducted with Coeur D'Alene Cache (CDK) managers and a representative from the National Interagency Cache System at NIFC.

Current Status

CDK Interagency Fire Cache is one of 15 Level 1 Fire Caches in the National Cache System. The cache achieved this status in 2012, and is the only state-operated Level 1 Cache in the system.

The consistent message heard throughout all interviews with IDL and federal partners is that the field users and dispatchers appreciate the level of service and products that the cache provides for them. Specifically, CDK was described as a very impressive operation, providing good collaboration and interagency participation. IDL partners are also impressed with CDK managers who have played a major role in national cache system committees, such as the NWCG Cache Manager Unit and the Interagency Cache Business System Re-engineering (ICBS-R) Project. The ICBS-R work group develops trouble-shooting strategies, and provides help desk support for the use and implementation of the National Cache Supply Network.

CDK cache operation are critical to the field, with a complex operation that includes:

- a vehicle maintenance shop,
- a pump and saw shop,
- a radio shop,
- firefighter and incident support equipment and materials, and
- facilities services for the CDK IDL compound work site.

CDK provides services and supplies for all state areas in Idaho, and for a number of cooperating agencies, including the emergency services community in the panhandle. Panhandle support includes assistance to hospitals, health districts, and cross-organization/function for the interagency panhandle fire community, such as rural and city fire departments.

CDK is managed in a way that builds on the strengths of both the USFS and IDL. For example, IDL hires AD (emergency hire) employees because IDL has an easier hiring process for these types of employees. USFS makes larger purchases from the federal supply chain because their purchasing authority is significantly higher than IDL.

Services

CDK stocks, ships, and retrofits all items in the National Cache System, and they refurbish and maintain pumps and saws. Field personnel send broken or old equipment, such as radios, to the cache and receive a replacement

immediately, thereby cutting down on the time they have to wait for equipment repair.

Pumps, saws, and radios are purchased by CDK and are pre-positioned in the field at the Area Offices, per the draft Operations Plan. Other agencies that benefit from the IDL pre-positioning plan include USFS, BLM, BIA and local tribes, and CPTPA.

Staffing

CDK staff has a wealth of experience and knowledge at all levels of cache operations, and historically they have been able to retain experienced temporary employees. Permanent staffing is provided by both IDL and USFS. CDK is staffed with:

- four full time employees, including the manager, assistant manager,
- six mechanics in the shop,
- five seasonal storekeepers, and
- a range of 35 to 60 Not-To-Exceed appointments and AD employees hired during the field season.

In 2016, an Administrative Assistant position was created. This position is dedicated to resource tracking and working with the Federal Excess Property Program (FEPP), Fire Fighter Program (FFP), surplus property management, equipment repair orders, and receiving new vehicles. FEPP provides additional resources options for IDL, such as obtaining water tenders and heavy all-terrain equipment.

The most significant workload for the CDK Shop is high-pressure pump maintenance and repair. A large portion of this equipment is fabricated and serviced by the CDK shop and sent out to fire departments and Rangeland Fire Protective Associations (RFPA).

The current staffing model been has been highly successful due to the level of commitment from the current staff, and the number of returning employees. The cache experienced the highest turnover in employees in 2016 when five employees, one storekeeper, and five seasonal employees did not return.

Cache Funding

Based on interviews, CDK acquires funding for purchasing equipment by charging staff time and the costs of supplies to incidents. Several cache employees are funded through preparedness funding, but fire suppression funds are also used to cover part of their salaries during fire season.

The ability to access federal and state procurement systems to support cache operations uses the strengths of each system, and successfully leverages the other partner's capabilities to meet the needs of the cache. For example, General Services Administration (GSA) historically provided services to the fire

community, and worked well with state and local agencies. GSA was replaced by the Defense Logistics Agency (DLA) in 2013, and DLA is now the primary supplier for the fire community. Under DLA, the U.S. Treasury requires non-federal agencies to pre-pay orders. Acting alone, IDL would be challenged to meet fire needs within its credit card limit of $25,000. However, the USFS is able to work within their significantly larger spending authority to ensure that all needed cache operations continue uninterrupted.

Findings and Recommendations

Finding:

- There appears to be high employee turnover in the pump shop due to competition for that expertise in the local area.

Recommendation:

- We recommend that IDL consider hiring a shop supervisor, and increasing the length of the seasonal tour for two mechanics.

Chapter 11 Fire Program Management

Roles, Responsibilities, Organizational Structure, and Decision-Making

IDL legal mandates are outlined within state statute, primarily Title 38, Chapters 1 and 4, and Rules sections 20.04.01 and 20.04.02. Responsibilities in these chapters and sections describe mandates in general and include the statement:

> *"...the director may delegate all or any portion of his duties...to one or more division heads or employees of the department of lands."*

The fire program is jointly administered by staff located in the Fire Management Bureau and ten area offices. However, the Area Managers report to one of two Operations Chiefs, either North or South, which then report to the Division Administrator of Operations. The Fire Bureau Chief reports to the Division Administrator of Forestry and Fire. Division Administrators then report to the Deputy Director (see Appendix C for current organization chart).

In addition to the ten area offices, there are two TPAs that administer the program in specific geographic sections of the state (see Figure 1). This organizational structure of staff and line authority, although common in resource management agencies, can create confusion in the decision-making process. For example, movements of suppression resources or assigning priority to wildfire incidents are urgent, time-sensitive decisions that can occur outside normal business hours. This process requires clear communication, which can be hindered if time has to be spent locating the person with decision authority.

Organization at the area level is straightforward, with the position of Fire Warden reporting to the Area Manager. Assistant Fire Warden and firefighter positions report to the Fire Warden. However, Mica and Pend Oreille Lake differ in that they each have two Fire Protection Districts with two Fire Wardens and associated staff.

IDL has developed a Fire Management Handbook (FMH) that provides extensive policy guidance on most aspects of the program. Each policy within the FMH is clearly numbered, dated, and identified with who prepared the policy. Also documented is who authorized the policy, what section of law allows the policy, and to whom the policy applies (Appendix C). This type of handbook is valuable in providing clear and consistent direction over time.

Finding:

- IDL has experienced communication challenges that are normal within most organizations. The need for clarification is recognized by IDL in the new Strategic Plan targets for FY 2017:

"Clarify decision making authority, responsibility, process, and communication channels."

"Define roles and responsibilities of Duty Officers in the FMHs."

Recommendation:

- Fully implement the Strategic Plan targets for 2017.

CHAPTER 12 Interagency Agreements

The key to a successful wildland fire management program is an effective interagency approach. Many interagency agreements, memorandums of understanding (MOUs), and plans are developed to facilitate this approach, and to gain the support of the public and all involved agencies. This chapter of the Fire Program Review examines and evaluates the agreements, MOUs, and plans currently in place in Idaho. The review includes all relevant levels of government and associated cooperators. Information in this section is derived from review of documents made available to WFA, as well as extensive interviews conducted by WFA.

Federal Interagency Agreements

The **Cooperative Wildland Fire Management and Stafford Act Agreement** (hereafter referred to as the Master Agreement), which includes IDL and the USFS, BLM, USFWS, BIA, and NPS, was updated in 2016. The Master Agreement and corresponding Operating Plan provide overarching guidance for the interagency "*commitment of the Parties; (and to) identify conditions to improve efficiencies; and facilitate the coordination and exchange of personnel, equipment, supplies, services, and funds*."[42]

The Agreement:

- Serves as the Master Agreement from which statewide operating plans, cost share agreements, local operating plans, and supplemental fire project agreements are tiered.
- Details important legal considerations such as personnel policies, funding limitations, record retention, claim waivers, and liability limitations.
- Provides for coordination of other non-fire Presidential-declared emergencies and major disasters under the National Response Framework.[43]

This agreement is reviewed annually and is in effect for five years, beginning from the date of signature in 2016 and ending December 31, 2021.

The Master Agreement provides a foundation for the operating plans, local agreements, and MOUs that facilitate the 'all agency response' to wildland fire in Idaho, and is critical to providing a successful level of fire protection by facilitating coordinated interagency interactions. The overall intent of the Master Agreement is to improve efficiency and effectiveness, and limit duplication in

[42]Idaho Cooperative Wildland Fire Management and Stafford Act Agreement, p. 5

[43] https://www.fema.gov/media-library-data/20130726-1914-25045-1246/final_national_response_framework_20130501.pdf

wildland fire protection through sharing of wildland fire resources among the agencies, encouraging interagency operations where they make sense, and acknowledging the use of resources from other agencies such as Idaho National Guard, Idaho Department of Corrections, Rangeland Fire Protective Associations, and local Fire Service Organizations, as well as outlining some of the procedures for that use. For example, the agreement states that "*...it is the State's responsibility to be the single hiring point for equipment and personnel obtained from Fire Service Organizations for all dispatches outside their jurisdictional responsibility."* [44]

The Master Agreement authorizes and describes procedures for agencies to participate in interagency fire caches, coordination centers, and dispatch centers, and provides the foundation for their operating plans. All signing agencies are members of the Northern Rockies Coordinating Group (NRCG) and the Great Basin Coordinating Group (GBCG) where coordination decisions are made for the respective geographic areas. For example, during the 2015 fire season, incidents were being prioritized daily by the Multi-Agency Command (MAC) Groups, which included prioritizing incidents on IDL protection lands, as well as IDL resources that were being committed. Figure 27 displays the areas for each GACC, and shows the potential complexity in both areas and along the boundary.

The Master Agreement also describes the definition and role of:

> ***Jurisdictional Agency:*** *"The Agency having land and resource management responsibility for a specific geographical or functional area as provided by federal, state or local law. The State has the responsibility for protection of state and private forested lands. Under no circumstances may a jurisdictional Agency abdicate legal responsibilities as provided by federal or state law."*
>
> ***Protecting Agency:*** *"The Agency responsible for providing direct fire management within a specific geographical area pursuant to its jurisdictional responsibility or as specified and provided by contract, cooperative agreement, etc."*
>
> ***Supporting Agency:*** *"An Agency providing suppression or other support and resource assistance to a protecting agency."* [45]

[44] Idaho Cooperative Wildland Fire Management and Stafford Act Agreement, Item 19, p.9.

[45] Ibid p.9.

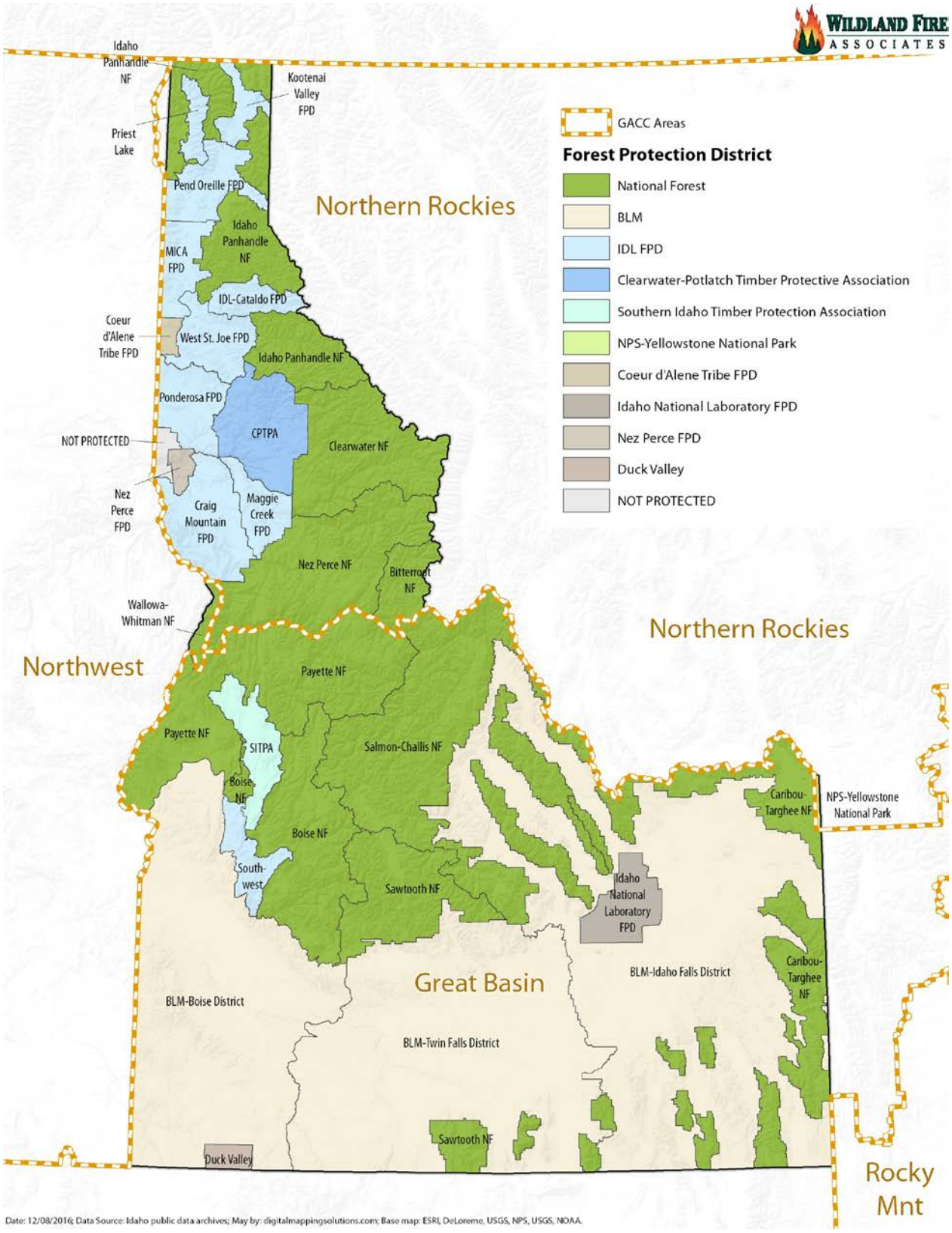


Figure 27 Outline of Geographic Area Boundaries

The Agreement commits the signing agencies to operate under the National Incident Management System (NIMS) and requires that resources shared among agencies will meet the National Wildfire Coordinating Group (NWCG) minimum standards for wildland fire qualifications. Standards are agreed to where possible and:

"*The Parties to this Agreement desire to achieve common standards within the Parties' best interest,* ***recognizing differing agency missions and mandates*** (emphasis added)***."***[46] *Each Party to this Agreement recognizes that other Parties' standards are reasonable, prudent, and acceptable."*

Interagency Operating Plans, both at the state and local levels, tier off of this agreement and provide the details of procedures and processes. Another important point of this agreement is a commitment by the signing agencies to communicate directly and resolve conflicts at the lowest possible level.

The Agreement describes the mapping of fire protection areas in Idaho (See Figure 27), and describes four options for providing fire protection on another agency's jurisdiction[47]:

1. Reciprocal Fire Protection: "As deemed appropriate, the Agencies may, by agreement and documented in Operating Plans, establish reciprocal initial attack zones for lands of intermingled or adjoining protection responsibility. Within such zones, a Supporting Agency may take initial attack action in support of the Protecting Agency."
2. Reimbursable (Cooperative) Fire Protection: "The Protecting Agency may request suppression resources of other Agencies for its protection work. Such resources shall be paid for by the Protecting Agency."
3. Exchange (Offset) Fire Protection: "Agencies may exchange responsibility for fire protection for lands under their jurisdiction. The rate of exchange is based upon acreage."
4. Contract (Fee Basis) Fire Protection: "For an agreed upon fee, one Agency may assume fire protection responsibilities on lands under the jurisdiction of another Agency. The terms and conditions of such arrangements must be included in the Statewide Operating Plan and carried out through an appropriate procurement document."

The use and reimbursement for interagency fire resources is covered extensively. Recognition of differing agency policies is noted for areas such as aviation operations, law enforcement, accident investigation and reporting, procurement, and use of communication systems. Structural suppression and

[46] Ibid. Item 34, p. 12.

[47] Ibid. Item 40, p.13-14.

protection are defined, and guidance is provided for when these actions are needed. Cost sharing on joint jurisdictional fires or for temporary support functions is described, as is cost recovery processes on negligent fires.

Within the preparedness section, the Agreement provides for cooperation on fire prevention, public use restrictions, training, prescribed fire and fuels management, and smoke management. An important section of the Agreement details operational actions such as fire notification, fire reporting, delegations of authority, and response to fires. Specific language is included to describe the intended process when a fire burns across protection boundaries or threatens another jurisdiction. This guidance is very important for managers to understand and use, as agencies often have different fire management objectives for the same fire. Direction for cost sharing on boundary fires is also included.

Annual Operating Plans

The Annual Operating Plan (AOP) is tiered from the Cooperative Wildland Fire Management and Stafford Act Agreement. An AOP describes *how* a process or action is to be done and *what* is agreed to within the Agreement. For example, the Agreement designates the state as the primary agency for local government fire resource mobilization. The AOP will detail how that process occurs, including consistency in rate structure and billing processes. Federal/IDL AOPs and local agreements tiered to the master federal and state agreements include:

- Northern Rockies Annual Operating Plan for Cooperative Fire Management Agreement
- North Idaho Local Annual Operating Plan
- North Central Idaho Local Annual Operating Plan
- Snake-Salmon Fire Management Local Annual Operating Plan
- Southwest Idaho-Eastern Oregon Annual Operating Plan
- Master Agreement for the Great Basin Coordination Center
- Great Basin Coordinating Group Annual Operating Plan

General Recommendation: Annual local interagency training sessions that include both Line Officers and Fire Managers would ensure a common understanding of the application of this agreement. These sessions may include exercises that require application of portions of the agreement.

Safety

Interviews with IDL employees did not indicate any significant safety issues. Common standards for training and qualifications are in place Investigations of accidents and fatalities will always be a challenge. Current IDL policy is for managers to use the IDL Critical Incident Response Guide for all serious

accidents and injuries, and additional direction for serious incidents involving interagency partners is located in the Statewide Operating Plan.[48]

Communication, Cooperation, and Coordination

Finding:

- Interviews with federal and other state cooperators revealed concerns from individuals at both NRCG and GBCG concerning a lack of full participation from IDL. Concern was expressed that at times IDL did not have a representative for Coordinating Group or MAC group decisions. When this occurs, the IDL perspective is not included and the decisions may not align with the needs of IDL.

Recommendations:

- IDL needs to find a way to assure adequate representation in both of the GACCs. Representation is needed for MAC groups, GACCs, and the Coordinating Group functional committees. IDL representatives need to have adequate experience and the authority to speak for IDL on matters of financial commitment and agency policy, as well as incident and resource prioritization. IDL representation on each of the functional committees for each GACC should be the goal. The Fire Business, Operations, Training, Prevention and Education, and Aviation committees are the most active, and they provide important review of current issues and recommendations to the GACC Board for resolution of the issues. Representatives would normally come from the Fire Bureau program managers, however this could be used as an employee development opportunity for other IDL staff. IDL will need to prioritize the commitment to these committees. Current participation of IDL employees in GACC committees, such as the Fire Business committees, is greatly appreciated by other cooperators.

Training

IDL does a good job of taking advantage of local interagency training with USFS and BLM when schedules permit. Interagency training should be encouraged and sustained. The IDL Engine Academy is a good model for interagency cooperation, and meets the needs of all agencies that participate. Participation on the Northern Rockies and Great Basin Training Committees is an important avenue to provide input for IDL training needs and priorities; and to ensure the participation of IDL training coordinators and instructors with interagency training sessions. The Fire Bureau Training Program Specialist position is a logical choice to fulfill this role.

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[48] 2015 Statewide Operating Plan, Appendix IX, p. 28 and 29.

Effectiveness

Cooperation between IDL and the federal agencies is very good. The recognition of different missions and objectives is the key to working together, and IDL employees exhibit this understanding. For example, Idaho Panhandle National Forest may manage a fire for resource objectives, but for IDL the objective is to keep the fire small while providing for firefighter and public safety. Each agency seems able to understand the approach of the other agency, and to manage and adapt to the differing objectives.

Finding:

- Education, training, and mentoring of new Fire Wardens, Assistant Fire Wardens, Area Supervisors, and Fire Bureau Program Managers and leaders within IDL are important to maintain effectiveness. IDL data indicates that over 40% of these employees have two years or less experience in their positions.

Recommendation:

- Annual training that focuses on application of these interagency agreements and operating plans is recommended for all managers. Newer managers will benefit from interaction with more experienced managers, and all managers benefit from reviewing agreements and operating plans before fire season.

Local Fire Service Organizations (FSO)

IDL guidance for MOUs and AOPs with local fire protection agencies is found in FMH 803. The expectation is that all IDL Forest Protective Districts and TPAs will enter into MOUs with all local government fire protection agencies that share a common jurisdictional boundary.

The MOUs and associated AOPs describe how the agencies will work together during multi-agency responses to wildfires. Specific items included are jurisdiction, fire reporting, fire response, fire command, and standards for fire operations. Ordering of special resources from IDL, sharing of radio frequencies, and fire investigation procedures are discussed. The process for handling fire costs and billing is included with reference to the *Idaho Fire Service Organization (*ISFO) *Rate Book,* which lists current rates for all types of equipment as well as the necessary documentation for payment.

For actions beyond initial attack, IDL is the single point of hiring of local fire service equipment and personnel for wildland fire within Idaho. The use of the IFSO rate book provides some level of standardization for rates paid, as well as hiring and payment procedures across the state.

Safety

The MOU's and AOP's with local fire districts help improve safety by outlining common operational standards, and providing for better communication between agencies.

Communications, Cooperation, and Coordination

Communications, cooperation, and coordination increase with an MOU and AOP in place locally. The planning processes for the MOU and AOP allow for the principle people from each agency to build relationships before there is wildfire. The processes also facilitates an understanding of what a wildfire response will look like that everyone can agree upon. Based upon interviews, the current level of interaction between local fire service organizations and IDL is appropriate and valued by local fire chiefs.

Effectiveness

The intent of the local MOUs and AOPs is to increase effectiveness by answering some of the common questions before an incident occurs. For example, MOUs and AOPs address questions such as what radio frequencies will be used for fire operations and what qualifications system will be used for firefighters. The current IDL MOUs with local fire service organizations answer these questions. MOUs improve effectiveness where they have been developed and implemented, kept current, and the parties know and abide by the agreement. As with most agreements, keeping them current and making sure they are understood is a constant challenge. Annual review of MOUs by all parties is needed. Currently IDL has at least one MOU with each of the local FSOs within IDL protection, and statewide MOU with an additional 47 local FSOs.

Fiscal Responsibility

The local MOUs, in conjunction with the *Idaho Fire Service Organization Rate Book,* explain the fiscal details for everyone involved. Based upon review of documents and interviews, the MOUs are effective concerning fire business.

Timber Protective Associations

IDL maintains an agreement with the two Timber Protective Associations (TPAs) in Idaho: the Clearwater Potlatch Timber Protective Association (CPTPA) and the Southern Idaho Timber Protective Association (SITPA). These agreements are considered "*contractual in nature.*"[49] They are in place for five years and are reviewed annually. The agreements establish the required standards of fire protection, as well as detail an annual review process to ensure preparedness for the fire season. Upon completion of the annual review, the IDL Director certifies

[49] 2015 Forest Protection Agreement between IDL and the TPAs, page 1

to the State Board of Land Commissioners that the TPA has met the standards of fire protection.

The agreements outline fiscal details regarding annual budgets and payment processes. The TPAs agree to use the IDL policies for firefighter qualifications, resource mobilization, preparedness, and incident business practices. Provisions include the opportunity for mutual assistance across protection areas, as well as assigning an IDL Line Officer on fires that require an organized Incident Management Team. IDL designates the corresponding regional Operations Chief to represent IDL on each TPA Board of Directors (i.e., the South Operations Chief for SITPA and North Operations Chief for CPTPA). The agreements allow IDL to "*assume direction and control*"[50] of a fire when it is deemed that proper action is not being taken.

Supplemental exhibits to the agreements include additional details regarding fire suppression billing and payment, standards of protection, and any additional assigned duties and related payments from IDL.

Safety

The TPAs require the same firefighter training and qualification standards as IDL, which provides consistency of operations and an accepted level of safety. CPTPA changed some of their requirements related to use of personal protective equipment after the firefighter fatality on the Steep Corner Fire in 2013. Additionally, CPTPA and SITPA provide a copy of their safety plan to IDL as part of the annual readiness review process.

Communication, Cooperation, and Coordination

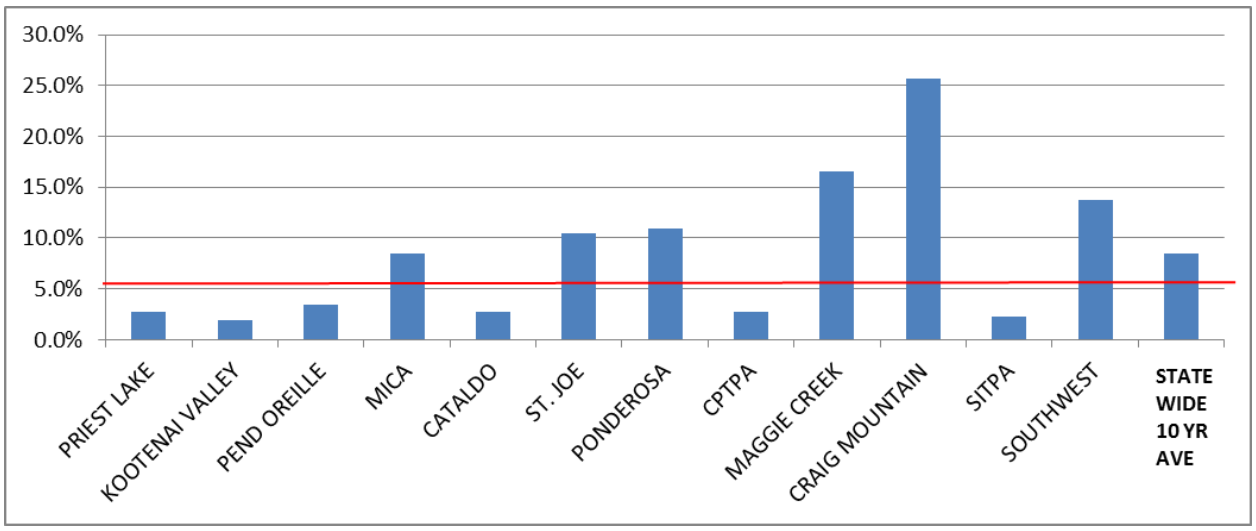
Interviews with IDL and TPA employees indicate the TPA fire organizations integrate well with IDL and federal firefighting forces. TPAs can often acquire private timber industry resources, such as heavy equipment and air patrol, which other agencies cannot mobilize in a timely manner. Conversely, TPAs can access other resources through IDL, such as Incident Management Teams, 20-person crews, and air tankers.

Effectiveness

SITPA and CPTPA are the two remaining private timber protective associations in Idaho. Their long history and effectiveness, especially given their success with initial attack and keeping fires small, (Figure 28) indicates a good fit and a continued future. A close positive relationship with the timber industry appears to support continued TPAs in Idaho.

[50] 2015 Forest Protection Agreement between IDL and TPAs, page 3

Figure 28 Percent of fires over 9.9 acres by district for 2007- 2016. Goal is 6% (shown with a red line).



Fiscal Responsibility

Base budgets for the TPAs include funds from contracted hazard reduction work, forest improvement work, and forested landowner assessments. With the flexibility to act independently, SITPA recently increased firefighter wages to address recruitment and retention needs. To ensure uniformity in fiscal management of large fires, an IDL Line Officer is assigned to assist in direction and management of the IMT during any Type 1 or 2 large fire on TPA protection lands.

Rangeland Fire Protective Associations (RFPA)

IDL currently has agreements with eight Rangeland Fire Protection Associations (RFPA) located primarily in southern Idaho. Each agreement outlines the relationship between IDL and the RFPA, including standards of performance for the RFPA, as well as the role of IDL in providing training and equipment to the RFPA. The agreements require the Chief of the Fire Bureau to be named as the IDL representative for the agreement, but daily contact and workload is delegated to the South Idaho Fire Liaison position. An important point within the agreements is that the RFPAs are independent entities and conform to Idaho Code § Section 38-104. Both parties to the agreements have limited obligations for funds to the other party, and the agreements are reviewed every five years.

Additionally, the agreements require an annual meeting and performance audit by IDL. The audit includes a review of the RFPAs insurance and training records; and a list of RFPA resources, members, and supervisors is to be provided to IDL. RFPA agreements also contain operational direction for assigning an Incident Commander, as well as procedures on how to handle a wildfire in an area where an RFPA overlaps with another fire district.

Safety

Fire training is standardized between the state and federal agencies and the RFPA members, which has increased firefighter safety. Examples of this increased safety are:

- Better tactical coordination on the ground.
- Better use of the ICs for an organization for fire suppression.
- Increased personal protective equipment use by local ranchers.
- Better communication with the purchase of new radios.

Communication, Cooperation, and Coordination

Based on interviews, all aspects of communication, cooperation, and coordination have increased in areas with an RFPA agreement in place.

Effectiveness

Agreements with RFPAs have increased effectiveness of local firefighters working with state and federal agencies due to better communication, coordination, and cooperation. An example of the workload the RFPAs have accomplished is shown in Table 7. IDL, BLM, and local landowners appreciate the benefits of RFPA efforts.

Table 7. Idaho Rangeland Fire Protection Associations (2016)

RFPA	Total acres	Private acres	Non-private acres	Mutual Aid acres	Mmbrs	# Trained Mmbrs	2106 Fire Season		
							Fires	Acres	# Mmbrs
Mountain Home	544,962	199,971	344,991	124,228	41	35	1	412	1
Owyhee	1,342,662	249,502	1,093,160	54,858	56	58	7	60,322	36
Saylor Creek	2,222,204	131,126	2,091,078	679,943	79	68	2	2,072	2
Three Creek	1,120,203	114,598	1,005,605	474,103	55	44-45	6	555	24
Black Canyon	185,384	108,556	76,829	926,157	20	19	3	664	15
Shoshone Basin	488,054	174,940	313,114	338,521	19	19	9	540	32
Notch Butte	341,170	74,535	266,635		11	11	3	812	5
Camas Creek	1,494,609	378,833	1,115,776	156,251	39	39	2	430	2
Total:	7,739,247	1,432,061	6,307,186	2,597,810	320	249	33	65,807	117

Fiscal Responsibility

RFPAs are self-supporting and IDL has no financial responsibility to provide funding for their operations. IDL has received some appropriations from the Idaho legislature to assist with startup of the RFPAs and to fund some costs associated with equipment development. Additionally some grant funding has been used to meet the costs of equipment development. This type of funding will continue to be important in the future as additional RFPAs are formed.

Recommendations:

- Shop development projects, such as Federal Excess Property Program (FEPP) and Fire Fighter Program (FFP) equipment from IDL, also need continued support and funding. The current annual grant funding of $40,000 is adequate to cover operating costs. However, high turnover and difficulty hiring '1385' designated Mechanic positions is preventing the shop from being able to meet production expectations. Converting these mechanic positions to permanent, full-time positions would help with retention of these employees, and enable the shop to meet the equipment needs of the RFPA program. As the number of RFPAs increases, development and prioritization of specific goals and funding sources will be important to enable the Program Manager to be most effective.

Tribes

Current agreements with Idaho tribes are accomplished through the federal Bureau of Indian Affairs and are addressed in the earlier discussion for federal agreements.

Interagency Dispatch Operations

IDL is a partner in seven Interagency Dispatch Centers. The following discussion describes the interagency agreements reviewed by WFA that cover dispatch center management such as cost share agreements, operations, staffing, center oversight such as Boards of Directors, and Standard Operating Procedures (SOP) for operations. Web page links to the centers and referenced interagency agreements are included where available.

Coeur D'Alene Interagency Dispatch Center (CDA)

http://gacc.nifc.gov/nrcc/dc/idcdc/dispatch/dispatch.html

Based on interviews and a review of the agreements and standard operating procedures (SPOs) of the four primary dispatch centers, Coeur D'Alene Interagency Dispatch Center (CDC) has one of the more successful models for interagency cooperation. The agreements reviewed were Coeur D'Alene Dispatch Center SOPs and Mobilization Guide. These resources were easily available on the center's webpage, and were signed in 2016.

Dispatch Center SOPs are recommended by the Interagency Operations Committee and approved by the Center's Board of Directors (BOD) in June of 2016. The Mica Area Manager represents IDL on the BOD with representatives from the USFS and the Coeur D'Alene Tribe. SOPs are very thorough and an excellent resource for both day-to-day users and resources assigned from outside the area. Best practices are found in Chapter 40 for Roles and Responsibilities, and Chapter 50 for Aircraft.

The Center's Mobilization Guide states the purpose of the guide is to "...supplement the National and Northern Rockies Mobilization Guides." Users of the Guide need to be familiar with all three Mobilization Guides. The signers of the document are the IDL Bureau Fire Chief, the Fire Program Manager for the Coeur d'Alene District Offices of BLM and USFS, and the Forest Manager for the Coeur D'Alene Tribe.

Personnel from both IDL and USFS staff the CDC. The participating agencies and bureaus bring unique policies and abilities to the center which allow successful leveraging of each other's strengths in areas such as hiring, facilities, radios, and procurement requirements to benefit the center as a whole. Good relationships among cooperators provide the ability to address personnel or operational issues with a team approach, which minimizes impact to the field. The interviews revealed that the governing BOD for the Center is fully engaged, providing needed leadership and support.

Grangeville Interagency Dispatch Center (GVC)
http://gacc.nifc.gov/nrcc/dc/idgvc/

Grangeville Interagency Dispatch Center (GVC) serves a large number of cooperators and has a diverse customer base, including a Tier 4 dispatch center (Clearwater-Potlatch Timber Protection Agreement CPTPA). The GVC Project and Financial Plan, and the Board of Directors Charter were reviewed. The review indicates the appropriate agreements are in place, although there did not appear to be an SOP similar to the Mobilization Guide document on the GVC webpage. However, the webpage does provide many resources for users of the center.

Project and Financial Plan

The current financial agreement between USFS and IDL is signed by the IDL Fire Business Management Coordinator and is updated annually. The current one is effective through December 2016. The agreement identifies the amount of funding IDL and the USFS will each contribute for center operations. In addition to providing staff, for fiscal year 2016, the IDL fair share funding in the agreement is not to exceed $21,414.06. USFS does not assess an overhead charge when they submit this bill to IDL. The current agreement identifies that IDL will share 33% of the operating cost. Based upon available financial documents, it appears that IDL may not be meeting this goal.

The GVC Charter allows IDL to annually review the requested operating budget for the Center.

Charter - Board of Directors (BOD) Draft for 2016

The Charter provides for IDL partnership and participation in center operations. Membership of the BOD consists of Line Officers from IDL and USFS, which are the two agencies with fire protection responsibilities. There is also reference to the Director for Forestry and Fire for the Nez Perce Tribe. The BOD is tasked with providing oversight and monitoring for the center. The BOD has two meetings annually, with the Center Manager providing various reports and budget requests to the BOD. The Center Manger is responsible for scheduling BOD meetings and providing note taking.

Staffing at GVC is provided by both IDL and USFS. Based on the current Organization Chart, IDL provides a permanent full-time Assistant Center Manager, one Lead Dispatcher, one Night Dispatcher, one Dispatcher, and one Front Desk person. After the 2015 season, IDL added an additional dispatch position included in the staffing above. The USFS provides a Dispatch Center Manager, an Assistant Center Manager, four Lead Dispatchers, and five additional dispatch personnel.

The facility is located within a newer USFS compound, and the center has been updated with new work stations. The space is open, with good light and new equipment.

Recommendations:

- SOPs, mobilization guides, and agreements that include CPTPA should be reviewed because some interviews indicated that communications between GVC and CPTPA dispatch offices during large incident support have been challenging. Ensuring that there is a definition of the point at which the CPTPA Tier 4 Dispatch Office exceeds its capabilities is important, and a description of how they request support from GVC would be helpful.
- IDL should consider instituting an Operations Group for GVC due to the complexity of the interagency fire responses.

Payette Interagency Dispatch Center (PAC)

http://gacc.nifc.gov/gbcc/dispatch/id-pac/pac/index.php

http://www.sitpa.org/

Southern Idaho Timber Protection Association (SITPA) became a partner in the Payette Dispatch Office in 2016. Prior to this time, SITPA had operated a Tier 4 agency-specific dispatch operation. Benefits of the new agreement include reliable 24-hour coverage and better-coordinated communications and responses for all interagency partners. The increase in coverage and improved

communication is critical because the dispatch area includes mixed jurisdiction areas: private lands, SITPA, BLM-protected Bureau of Reclamation (BOR) lands, and the Boise and Payette national forests. SITPA resources and response areas are included in the Dispatch Run Cards.

Although the final agreement was not in effect until June 2016, SITPA and the Payette National Forest implemented the intent of the new agreement in April 2016. Information about the dispatch center is posted on their webpage, which provides many resources for users of the center.

Interviews indicate that interagency relationships at this Center are successful. In 2016, the USFS supplemented staffing and integrated the IDL helicopter module into existing helicopter operations at McCall when IDLs Bell 212 helicopter pre-positioned and co-located with Payette National Forest helicopters. Since April 2016, there has been an increase in sharing of fire crews and personnel between the USFS and SITPA modules. Additionally, the new SITPA Fire Warden facilitated a pre-season orientation.

The following agreements were reviewed:

- Payette Interagency Dispatch BOD Charter, which was signed by IDL in 2015 and went into effect in June of 2016. Signatories for IDL include the State Forester and Deputy Director for IDL.
- The SITPA President Supplemental Fire Project Agreement and Financial Plan which outlines the financial and resource commitments for both parties. The SITPA President and the USFS Forest Supervisor signed the agreement. Interviews indicate that the financial contribution is appreciated and covers fair share expenses in the dispatch center.

All Staffing at the Dispatch Center is provided by the USFS. The 2016 Agreement provides funding for a full time position to support SITPA. Interviews of all parties indicate that this model of center management is highly successful.

Recommendation:

- Examine the potential for SITPA to form a partnership with the Fire Cache and Air Tanker base. For example, SITPA might consider requesting funding to help the USFS hire temporary employees.

Boise Interagency Dispatch Center (BDC)
https://www.idahofireinfo.blm.gov/southwest/

IDL provides funding for overall BDC center operations, with personnel and the facility provided by the USFS and BLM. BDC is staffed with federal employees, including a Center Manager, two Assistant Center Managers, five Lead Dispatchers, four Initial Attack Dispatchers, and one office assistant. Center cooperators include Boise District BLM, Boise National Forest, and Southwest Area Idaho Department of Lands. The Center provides dispatch services for 9.1 million acres.

Based on interviews, the interagency relationships with IDL are positive, and IDL provides good participation in center operations. Good communication is facilitated during periods of high fire activity because an IDL Duty Officer is present in the center. Dispatch Run Cards include IDL, BLM, and USFS for all interagency responses.

Comments concerning the following reviewed agreements:

- Board of Directors Charter results in a very engaged BOD, which meets monthly. The IDL representative to the BOD is the Fire Warden for the Southwest Area. The Charter requires an Operations group and the IDL member is the Fire Warden for the Southwest Area.
- 2016 Boise Dispatch Center Annual Operations Plan outlines procedures for Dispatch Center operations and includes the Financial Operations Plan in Appendix A and B. IDL provides $16,500 for staffing and $9,840.90 for Operating Costs.

The BDC website is well organized and has valuable information about the Dispatch Center.

Recommendations:

- We recommend that IDL consider joining with BDC to prepare an Operations Plan or SOP that identifies and pre-plans resource movement of IDL resources into the BDA area. The plan should identify pre-determined staging and temporary bases of operations for aircraft and resources being pre-positioned to cover Southwest Idaho incidents. This plan should be incorporated into the BDC Operations Plan. This is a standard practice.
- It is recommended that IDL review the current Financial Operating Agreement with an audit of the BDC IDL workload. Interviews and Financial Operating Agreements reviewed indicate that BDC would benefit from an increase in financial support from IDL.

Interagency Dispatch Centers in South Central, Eastern and Central Idaho that support IDL Units/Areas

There are three additional Interagency Dispatch Centers that include IDL as a cooperator. IDL does not provide funding or staffing to these centers.

South Central Idaho Interagency Dispatch Center (SCIIDC)

SCIIDC is located in Shoshone, Idaho and provides dispatch support for fire resources in south-central Idaho, northeastern Nevada, and the northwest corner of Utah. The center employs a combination of 10 to 12 temporary and permanent BLM and USFS personnel.

Eastern Idaho Interagency Fire Center (EIIFC)

EIIFC is a cooperative effort between the Idaho Falls District BLM and Caribou-Targhee National Forest. Facilities and resources are shared between the two agencies. EIIFC provides fire coordination on over 7.5 million acres of public lands, encompassing 21 counties in four states, including southeastern Idaho, southern Montana, western Wyoming, and northern Utah.

The Central Idaho Interagency Fire Center (CIC)

The CIC is located in the Salmon-Challis National Forest Supervisors Office, at the Public Lands Center in Salmon, Idaho. CIC is an interagency fire and aviation dispatch office serving the USFS, BLM, Idaho Fish and Game, and IDL.

Additional Agreements

The following are other interagency agreements and Memorandum of Understandings (MOU) that involve the fire management program of IDL.

Idaho Department of Fish & Game (IDFG)

There is an MOU between IDL and IDFG that provides the direction for use of IDFG employees and equipment on wildland fire or all hazard incidents when requested by IDL. The MOU includes rates for specific types of equipment, and the billing process for IDFG to use for reimbursement. The MOU is in place for five years and provides contact information for each agency.

Finding:

- Currently IDFG policy provides compensatory time, not overtime, for additional time worked on fires for IDL. This is a disincentive for IDFG employees to assist IDL in fire suppression work.

Idaho Department of Park & Recreation (IDPR)

IDL and IDRP have two agreements. The first agreement provides for the use of IDPR personnel and equipment by IDL "...for initial attack of fires at the district level, for suppression of larger fires at the "project" level, to conduct prescribed burns, and to conduct other non-emergency projects."[51] The agreement details the obligations of each agency and provides direction for billing and reimbursement of costs.

[51] Human Resources and Equipment Agreement Between State of Idaho, Department of Parks & Recreation and State of Idaho Department of Lands, 2007. p. 1.

The second agreement provides for IDL to provide fire protection for specified IDPR lands. The level of protection and the cost of the protection is agreed to be the same as that for private forested lands and improved lots or parcels.

Finding:

- IDL has two agreements with the Idaho Department of Park and Recreation (IDPR).

Recommendation:

- IDL and IDPR should combine the two agreements.

Idaho State Police (ISP)

This MOU states the process and stipulations for IDL to order and use the Mobile Command Center (MCC) from the ISP within the Boise Dispatch Center Zone. Each agency designates a liaison for the MOU. The process and costs of ordering and using the MCC are detailed. The MOU is in effect for five years from the date of signature.

Idaho Department of Transportation (IDT)

This agreement allows IDL to establish Temporary Traffic Control (TTC) Zones when needed to provide for public and firefighter safety. The agreement provides for notification of IDT supervisors when a TTC zone is implemented and provides contact information for IDT staff. All TTC zones will be in accordance with the Manual on Uniform Traffic Control Devices. The agreement also spells out procedures for IDL to close state roads due to fire activity for up to 2 hours.

Finding:

- The agreement with the Idaho Department of Transportation is frequently used by both IDL and federal agencies.

Recommendation:

- Continue to update this agreement and educate IDL managers as to its content and intended use.

University of Idaho

This agreement provides for fire protection of the University of Idaho forest and range lands by IDL. The agreement details how and when the University of Idaho lands will be identified to IDL, and that the rate charged to the University will be the same rate as the private forest lands assessment rate.

Northwest Wildland Fire Protection Compact Agreement

As authorized in U.S. Public Law 105377, 1998, IDL is party to the Northwest Compact. This agreement provides for sharing of wildland fire resources across Alaska, Washington, Oregon, Idaho, and Montana, as well as the Canadian

provinces of Yukon Territory, Alberta, British Columbia, Northwest Territories, and Saskatchewan. The agreement outlines procedures and processes for ordering, mobilizing, using, and recalling fire resources, as well as agreement for payment processes.

An important portion of this agreement involves procedures for crossing international borders with firefighting personnel and resources, including aircraft. Administrative procedures are listed under the 2016 Northwest Compact Member Agency Administration Procedures document, which is also signed by all parties.

Finding:

- Use of this agreement to obtain additional resources has been very effective for IDL, especially when resources are difficult to find within the U.S. system.

Recommendation:

- IDL should continue to emphasize the Northwest Wildland Fire Protection Compact Agreement. Additionally, opportunities will arise that will allow IDL to send firefighters to Canadian provinces within the compact to gain experience and to see different approaches to similar challenges they may face in Idaho.

Idaho Emergency Operations Plan

IDL has a role in the Idaho Emergency Operations Plan as the lead agency for Emergency Support Function 4: Firefighting (ESF4). This role requires IDL staff to maintain an understanding of the statewide Emergency Operations Plan, as well as be available to support local counties and fire departments in the event of a disaster emergency response. IDL staff is also responsible for Federal Emergency Management Agency (FEMA) Fire Management Assistance Grant (FMAG) application and accounting. These grants provide substantial financial support to Idaho and individual counties to help pay for costs associated with large and potentially disastrous wildfires. The associated workload with an FMAG grant can be extensive and long-lasting.

Finding:

- There is a limited number of IDL staff familiar with and experienced in the ESF4 and FEMA FMAG functions. The need for this type of work generally occurs during active and severe fire seasons, which occur when IDL staff is busy with significantly higher fire workloads.

Recommendation:

- IDL needs to ensure adequate staff experience and skills to perform the ESF4 and FEMA functions. Additional trained staff, use of retired IDL employees and contractors, and personnel sharing with other states and agencies should be considered as ways to address this need.

Idaho Department of Corrections (IDOC)

The Human Resource Agreement and the Annual Operating and Financial Plan detail the terms and procedures for IDL to train and hire Idaho offenders for use on wildland fires, prescribed burns, and other projects. The Operating Plan discusses qualifications standards to be met and pay rates for each crew configuration for fire crews, project crews, and camp crews. Dispatch and mobilization processes for the IDOC crews and billing procedures are included, as well as payment rates for IDOC vehicles and meal allowances, and procedures and costs for using the Saint Anthony Work Camp Food Unit. This agreement is in accordance with the Idaho Cooperative Fire Protection Agreement with the federal agencies, and allows the federal agencies to use the IDOC crews for fire suppression needs.

The use of IDOC crews on fire and other forestry projects is a mutually beneficial agreement. IDL obtains local crews to perform the work at a reasonable cost, and IDOC gets funding to operate the program. Additionally, the inmates earn money and develop a work ethic and higher sense of self-esteem. Working together, IDL and IDOC can sustain this program into the future.

Findings:

- There is a shortage of qualified crew bosses from IDOC, which has limited the availability of the IDOC crews for fire use.
- IDL staff has expressed an interest in having the IDOC crews become qualified as Type 2 Initial Attack crews.

Recommendations:

- IDL could enable more crew dispatches for IDOC by providing fire leadership in the form of Crew Bosses and Squad Leaders from within IDL..
- IDL should consider evaluating what is required for an IDOC crew to become qualified as a Type 2 Initial Attack crew. IDL would need to provide dedicated qualified Crew Bosses and Squad Leaders for the crew.

Additional Recommendations

- As concerns arise, IDL will need to work with each of the other agencies to find resolution. This will require building and maintaining positive professional relationships with each entity. After the 2015 fire season, concerns were raised about having adequate experienced staff to assist

counties with the FMAG application and accounting process. IDL needs to identify and train staff to be able to address the increase workload during a significant fire season like 2015. Additional options for addressing the workload might include using other IDL staff, contracting with retired IDL employees, or contracting these services.

- A formal agreement between IDL and Idaho National Guard (IDNG) is currently being developed. IDL can facilitate development of the agreement by identifying best practices from other states such as Oregon, Montana, Utah, and Washington, which all use their National Guard frequently for wildland fires. Additionally, such an agreement should provide both agencies with clear expectations for when IDNG resources and Guardsmen are activated for wildfire mission use, and clearly define roles and responsibilities. Activation of IDNG resources usually require an IDL Liaison, and IDL needs to plan and train for this need.

CHAPTER 13 RECOMMENDATIONS

Given the current trends of increasing acres burned and rising costs for fire suppression, IDL should plan to make changes in the fire program in order to be able to readily respond to changing conditions. Additional planning in the areas of training, staffing, and new equipment will be required to successfully address how the agency expands, redeploys, and contracts with projected changes in fire behavior and area burned. WFA has made many recommendations throughout this document, however the following recommendations are considered to be the key priorities.

Short Term Recommendations

1. Fully implement the Strategic Plan targets for 2017, especially the following two targeted at clarification of organizational authority and roles:

"Clarify decision making authority, responsibility, process, and communication channels."

"Define roles and responsibilities of Duty Officers in the FMHs."

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2. Use the Idaho Fire Management Analysis System (IFMAS) to identify a baseline budget, type, and mix of firefighters, engines and aviation assets for the organization. Have the Fire Wardens Group ground truth the baseline budget to determine the appropriate location of the firefighting assets, and identify the most efficient level (MEL) to fund the needed firefighting assets. The difference between the baseline budget and MEL should define a budget enhancement request.

3. Representation from IDL is needed for MAC groups, GACCs, and the Coordinating Group functional committees. IDL representatives need to have adequate experience and the authority to speak for IDL on matters of financial commitment and agency policy, as well as incident and resource prioritization. The goal should be IDL representation on each of the functional committees for each GACC. The Fire Business, Operations, Training, Prevention and Education, and Aviation committees are the most active, and they provide important review of current issues and recommendations to the GACC Board for resolution of the issues. Representatives would normally come from the Fire Bureau program managers; however, this could be used as an employee development opportunity for other IDL staff. IDL will need to prioritize the commitment to these committees. Current participation of IDL employees in GACC committees, such as the Fire Business committees, is greatly appreciated by other cooperators.

4. Shop development projects, such as Federal Excess Property Program (FEPP) and Fire Fighter Program (FFP) equipment from IDL, need continued support and funding. The current annual grant funding of $40,000 appears to be adequate to cover operating costs. However, based upon interviews, high turnover and difficulty hiring '1385' designated Mechanic positions is preventing the shop from being able to meet production expectations. Contributing to the difficulty of attracting and retaining qualified mechanics is the current pay of $15.00 per hour which is below the national median of $18.20. A quick review of comparable jobs in the Coeur d'Alene area ranged from $17.75 to over $20.00. Converting these mechanic positions to permanent, full-time positions and a review of the current wage structure would help with retention of these employees, and enable the shop to meet the equipment needs of the RFPA program. As the number of RFPAs increases, development and prioritization of specific goals and funding sources will be important to enable the Program Manager to be most effective.

5. A consolidated GIS database for the various IDL areas that displays the patterns of sales, the consequent location of activity fuels, and the treatment and removal of these fuels over time, should be considered. Such a database would support the analysis of a potential relationship between the fuel layer characteristics created by the presence, or removal, of activity fuels, and the occurrence, cost, and behavior of wildfires in these areas. After discussions with IDL, to determine the cost of this recommendation, we recommend that IDL determine what is currently available within IDL and what is needed to consolidate the database.

6. Re-establish the Fire Business Committee and develop a charter to formalize this working group. We recommend that the committee have seven members, consisting of four Fire Wardens or Assistant Wardens, one North or South Operations person, Fire Business lead from the Fire Bureau, and an Area Manager.

7. A formal agreement between IDL and Idaho National Guard (IDNG) is currently being developed, and we recommend that this process by expedited. IDL can facilitate development of the agreement by incorporating the best practices from other states such as Oregon, Montana, Utah, and Washington into it, which all use their National Guard frequently for wildland fires. Additionally, such an agreement should provide both agencies with clear expectations for when IDNG resources and Guardsmen are activated for wildfire mission use, and clearly define roles and responsibilities. Activation of IDNG resources usually requires an IDL Liaison, and IDL needs to plan and train for this need.

Long Term Recommendations

1. We recommend the following staffing additions and changes to staff the pre-suppression and suppression recommendations. The total cost of $826,000

would be to support a 20-person Type 2 Initial Attack Crew, and hiring a Deputy Fire Bureau Chief.

We recommend that IDL Evaluate the current use and configuration of the Booster crews. Based on the evaluations consider combining the two current booster crews, adding 8 additional positions to create a 20 person Type 2 Initial Attack Crew. This Crew would be used at the discretion of the Bureau. The crew configuration would be a self- contained, readily available resource that could be broken down into 3 initial attack modules available in different areas of the state or able to respond as a crew. This crew would also give avenues for other IDL fire resources to develop qualifications specifically FFT1 and CRWB. We recommend IDL evaluate the positions and classifications needed for the creation of a Type 2 I.A. crew that would include:

- 1 Crew Superintendent
- 1 Crew Assistant Superintendent
- 3 Squad Leaders
- 15 Firefighters

Cost used to develop enhanced budget request for the 20-person Type 2 Crew is in Table 8.

Table 8. Budget for 20-person Type 2 Crew

Position	Qualifications	Cost
Crew Superintendent	ICT-3 and DIVS	$65,000
Crew Assistant Superintendent	DIVS (t)	$58,000
3 Squad Leaders	STCR	$125,000
15 Firefighters	FFTR 1 and 2	$156,000
Sub Total		$404,000
Existing Booster Crews		($188,000)
Enhanced Budget Request		**$216,000**

The need to upgrade the District Fire Resource Boss positions from 1385 hours to permanent full time should be evaluated on a periodic basis. As the trend towards larger fires occurs and the threats to life and property increases, IDL should consider upgrading some of these District Fire Resource Boss positions. The leadership and fire operation skills that will be needed in the future at this position may be difficult to maintain in seasonal personnel. Determining which positions to upgrade and at which Areas should be evaluated using data, modeling and the knowledge of experienced fire managers.

Other benefits of this upgrade would be improved retention and enhanced successional opportunities and an increase in depth of personnel with fire qualifications as these employees advance in the fire program. The current cost to implement this change would be $14,000 per position.

We Recommend IDL develop a position description for a Deputy Bureau Chief. It is recognized that the current Bureau Chief is at maximum span of control. Some of the recommendations made including moving the Community Fire Program Manager into the Fire Bureau, would exceed the span of control for the bureau chief. The addition of a deputy will also allow for more consistent engagement on the 2 GACC's as well as reducing the current span of control issue in the Bureau.

Enhanced Budget Request $826,000.

2. IDL should develop opportunities and avenues to decrease the time it currently takes for individuals to obtain fire qualifications. Employee development plans need to address specific timelines to obtain the qualification and the employee and supervisor should be expected to take the necessary steps to insure the timeframe is met.

The long-term goal should be to shorten the time it takes to become qualified at one level and move to the next in order to build depth in the IDL fire organization more rapidly. This applies to all levels of the fire organization, from Command and General Staff to the Prevention and Investigation level.

3. The Community Fire Program Manager, a relatively new position, is currently located in Forestry Assistance, co-located with other landowner assistance functions. Locating this position in the Fire Bureau would be a better fit, since CWPP work is done largely with volunteer, rural, and federal fire management organizations. The location of this position in the Fire Bureau would also facilitate the coordination of the planning, execution, and monitoring of hazard fuel reduction projects with IDL fire staff, such as engine and aviation personnel.

The addition of a statewide prescribed fire/fuels specialist, with an approximate cost of **$75,000**, is recommended to develop the IDL fuels program beyond site-specific activity fuels and WUI hazard reduction projects, to a scale which improves forest resiliency to wildfire and reduces wildfire risk more broadly.

4. The Fire Bureau Prevention Specialist position should be converted to a full-time position. Adjacent states, such as Montana, Oregon and Washington have multiple full time positions. As the population increases in the WUI of Idaho the need for the fire prevention program will also increase. The need to have clear goals and objectives for the fire prevention program and to develop the best delivery systems to meet those goals will be an important element of this

new full time position.

5. After the 2015 fire season, concerns were raised about having adequate experienced staff to assist counties with the FMAG application and accounting process. We recommend that IDL identify and train staff to be able to address the increase workload during a significant fire season like 2015. Additional options for addressing the workload might include using other IDL staff, contracting with retired IDL employees, or contracting these services.

APPENDIX A Review Team Biographies

Susie Bates

Ms. Bates has 35-year career with a diverse background in Interagency Aviation Operations and Policy development for the Department of the Interior and the USFS; and an early career that includes serving as a crewmember on a fire engine and 20-person crew, as well as helicopter manager, and smokejumper and forest dispatcher. In 2001, Ms. Bates, she as Regional Aviation Management Officer for the NPS Pacific West Region, provided standardization for helicopter operations and established required helicopter manager training and workshops in accordance with Interagency Helicopter Operations Guide for Resources and Law Enforcement Helicopter training standards. Since then, she has worked with DOI OAS as the interagency aviation training coordinator and working on aviation policy issues for the DOI; and served as the NPS Chief of the Branch of Aviation.

Barry Hicks

Mr. Hicks started his career in wildland fire as an engine crewmember and heli-jumper in 1962. Throughout his 39-year federal career, Mr. Hicks was a hotshot crewmember, smokejumper, and fire management officer. In 1980, Mr. Hicks became a District Ranger on the Moose Creek Ranger District of the Nez Perce National Forest. After 17 years as a line officer, Mr. Hicks finished his federal career as a Regional Aviation Safety Manager and Aviation Manager for the Northern Region of the USFS.

Ted Mead

Mr. Mead has a 41-year career in wildland fire management, that last 12 year of which were spent directing the Montana DNRC Fire & Aviation program, including budgeting, staffing, legislative, policy & procedure development, supervision, training, public & media relations, and fire suppression leadership. Mr. Mead served as the MT DNRC representative on NRCG, MAC Group, and NASF Western States Fire Managers group; and Agency liaison for legislative review of MT DNRC Fire Program during 2007 Special Legislative Session: "The Price of Flame" report, (leg.mt.gov), as well as assisting with NASF response to 2009 Federal Wildfire Policy Implementation. Additionally, Mr. Mead has served over 10 years on Northern Rockies IMTs in operations and Fire Behavior Analyst positions.

Rich McCrea

Mr. McCrea has a 33-year career background in wildland fire management, including serving on a hotshot crew, serving as a forester and fire management officer for 19 years, and 9 years as the National Fire Planner for BIA. Mr. McCrea has extensive fire experience, including being a qualified Fire Behavior Analyst, planning and implementing prescribed burns, and serving as a Lead Instructor for: basic firefighter and fire behavior (S-130, S-190), portable pumps and water

use (S-211), Intermediate Wildland Fire Behavior (S-290), Task Force Leader (S-330); and unit qualified instructor for Division Group Supervisor (S-339), Advanced/Intermediate Fire Behavior Calculations (S-390 and S-490) and FARSITE (S-493).

Tom Nichols

Mr. Nichols has a 39-year career background in natural resources management and wildland fire management, including receiving the Department of Interior Superior Service Award for efforts that led to restarting the Pacific West Region prescribed fire program after the 2000 prescribed fire moratorium following the Cerro Grande wildfire in New Mexico. Mr. Nichols has extensive experience developing local, regional and national policy for wildland fire, aviation and structural fire management; including three years as NPS Deputy Program Lead for Budget & Planning and four years as NPS Chief of Fire & Aviation Management.

Chuck Stanich

Mr. Stanich has a 40-year career background in wildland fire and forest management, including 12 years as a Forest Fire Management Officer in Region 1. Mr. Stanich is a qualified Type 1 Incident Commander, as well as a Fire Behavior Analyst, Fire Use Manager, and Type 1 Prescribed Fire Manager. Mr. Stanich has extensive experience with Fire Management Leadership, including providing Fire Operations leadership and mentor two Forest Fire Management Officers in developing a long-term plan addressing the management of multiple large fire events in California in 2008, serving as Cadre Leader for local courses of Fire Management Leadership for Line Officers and Agency Administrators, and service as Chairperson and member of the Northern Rockies Operations Committee from 2000 to 2010. Additionally, he assisted in the development of the current wildfire complexity and risk rating charts, and developed presentations on the management of multiple, complex incidents at the National level.

APPENDIX B Prevention Spreadsheets

(See next page.)

Worksheet #1, Prevention Overview

Area/District/ Association Name	ADA money spent/year	** ADA time spent/year	** Designated Prev. Coordinator	** Co-op affiliation	Fire cause concerns	Mitigation needs/projects	Industry inspections	Railroad inspections	Prevention Plan?	This include ADAs input? SEE TAB #2
IDL, Priest Lake	$4900 total (PC $1,500, TPC $2,200, OE $1,200)	400 hours	Pam Aunan (lead), Dan Brown	Bonner County Fire Prevention Coperative, 2 members	Campfires & debris burning . Many out of state contractors burn garbage & contruction materials.	Identified in the Bonner County BonFire CWPP.	Yes, 9 in 2016, 18 in 2015	No RRs in district	Bonner County Coop Plan	Yes
IDL, Pend Oreille	$2,000	80 hours	Ashley Stoneham (lead), Nate Rogers	Bonner County Fire Prevention Coperative	Debris burning, WUI fires, campfires	Lots of places of concern including Gold Hill, Hoodoo Mt., and Cape Horn	no	no	no	Yes
IDL, Kootenai Valley	$500	100 hours	Ken Homik	No coop. Would like to see one formed and have been thinking about it.	Debris Burning	More defensible space/fire adapted community stuff	no	no	no	Yes
IDL, Mica	$4,800	250 hrs	Shane O'Shea	Kootenai Co. Fire Prevention Cooperative	Debris burning, fireworks	We have several communities that are WUI and high risk (i.e. Bayview, Twin Lakes, etc.)				NO
IDL, Cataldo	$2,750	120 hrs	Jenny Rollins (lead) with Kjell Truesdell and Chris Meyers	Shoshone Co. Fire Prevention Cooperative, https://www.facebook.com/firecoop/	Some arson, debris burning	Shoshone County has a HFT program....would like more emphasis on firewise communities.				Yes
IDL, St. Joe	$300/yr on school programs, $205 on goodie bags	100 hrs on programs	Jocelyn Schiermeister (lead), Josh Harvey, Cory Flesher	No co-op	Debris burning, campfires, arson		No, industry parteners and foresters require fire tools and do inspections	no		Yes
IDL, Ponderosa	$400 total: $300.00 on Smokey Supplies, $100.00 in Signs	100 Hrs.	Michael McManus	N/A	Debris burning / Arson	N/A	No	No	No	Yes
IDL, Maggie Creek	$300	100	Nick Carter	North Central Idaho Fire Prevention Cooperative		Working with Idaho Co on fuel breaks; working w landowners to reduce their fuel				Yes
IDL, Craig Mountain	$1,000	100 hrs, ~10 events/ yr	Jed Pentzer (lead), Chris Gerhart	North Central Idaho Fire Prev. Co-op . http://idfirepreventi on.com/		Have been a few WUI mitigation projects. Most were done by Thom Hawkins with Nez Perce Tribe & counties.	No	No, "although the rail line is beginning to be used again, so may need to inspect in summer 2017"	No	Yes
IDL, Southwest	$350 ($200/year on average)	50	Rick Finis (lead), Tyke Lofing, Casper Urbanek	Treasure Valley Fire Prevention & Safety Cooperative	Motor vehicle related fires along hwy 55 corridor. Recommend ITD uses reader boards.	A Boise Forest Coalition entity is working with USFS to create fuel buffers around 2-3 large communities; several WUIs are w/in SW protection district				NO
IDL, Eastern	"Since we are not a district we don't do any of this"		Pat Brown, Justin Kidd							Yes
C-PTPA, Clearwater-Potlatch Timber Protective Assoc	$100 - $2,500 per year. Depends on the year and funding need for COOP, etc. Parade costs most. Coop dues and signage are the normal costs.	~250 hours/year	Len Young, Cameron Eck	North Central Idaho Fire Prev. Co-op, attend 2-3 mtgs/yr	Highway corridors, arson caused slash piles and in particular areas.	WUI dropped after lack of funding. Could use more if money were available. Need more highway corridor fuels treatment. Need more funding to build engine fill sites or helicopter ponds on private property in strategic areas.	Yes, "mostly for primary member landowners on their contractors," ~6-20/yr	Tried to with MCS and PDS. No support from legal when PDS had a case. A lot of local political pressure from the business with county.	No formal plan. Passed down from generations. **No one will follow a formal prevention plan if asked to do it. That will be a hard**	Yes
SITPA, Southern Idaho Timber Protective Assoc	$500/yr	400 hrs (3-4 engine crew days/yr)	Ken Stump Paul Wagner Tim Tevebaugh	Valley County Fire Working Group's Prevention/Educa-tion Committtee			0 in 2016. Need to do more. There needs to be training.		no	Yes

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	**Worksheet #2, Prevention Details** -- Prevention coordinators, please complete/correct for your ADA																	
2	**ADA**	**Date** (or start date) of event (approx is OK)	Location of event	Reporting agency	**Name of event**	**Type of event (See choices below)**	**Explanation** of "Other" type of event, or more info	**Topics covered**	Type of material distributed	Event best matches (See choices below)	Involvement (See choices below)	Explanation of "Other" involvement, or more information	**** Approx number of interactions w/ people ****	# of student interactions	# of children interactions	Include ADAs input?	**SEE TAB #1**	
3						**Meeting, Workshop, Training, Parade, Exhibitor/Booth, School program, 1-on-1, Signage, Media contact, Other**				Resilient landscapes, F. adapted comm., Safe & effective response	Coordinated, Attended, Provided material, Collaborative effort, Other		*(Signage is tough. The # of signs and types of locations helps.)*					
4	**IDL, Priest Lake**	1/1/2016	Coolin	State	Packets distributed	Packets are available at the office all year. Many children return every year.		Fire prevention and safety, IDL what "we do".	Smokey materials and 911 refrigerator magnets	Safe and effective wildfire response	Coordinated		3000		3000	Yes		
5	**IDL, Priest Lake**	4/1/2016	Coolin	State	Signage	Signage	There are 45 birdhouse signs, one at all main intersections, snowmobile/ATV parking lots, boat launches	Warning signs and Keep Idaho Green posters		Safe and effective wildfire response	Coordinated		unknown, all visitors to Priest Lake drive by them			Yes		
6	**IDL, Priest Lake**	5/15/2016	Coolin	State	Smokey & Woodsy Poster Contest	School program	Finale for program, which started in Sept. with all 4 local area schools, homeschools, etc, 1st-5th grade. Awards programs in each school, Smokey appearances	Fire safety, Smokey	Packets with Smokey educational materials and swag??? given to all students, awards and prizes to contest winners	Safe and effective wildfire response	Collaborative effort	Collaborated with Priest Lake Fire Protection District	300	300	300	Yes		
7	**IDL, Priest Lake**	5/9/2016	Coolin	State	Coolin Days Parade	Parade	Smokey rode on the engine and greeted kids afterwards	Fire Prevention		Safe and effective wildfire response	Attended / Smokey Picnic afterwards		avg 10,000		4000	Yes		~
8	**IDL, Priest Lake**	4/1/2016	Coolin	State	Smokey appearances	Other	Make arrangements for Smokey to appear at parades, library events, free fishing day, etc.	Fire Prevention			Attended		1500		1000	Yes		~
9	**IDL, Priest Lake**	8/1/2016	Coolin	State	2 Summer park programs	Other	Coordinate with Priest Lake State Park for summer fire prev. programs				Collaborative effort		150		25	Yes		~
10	**IDL, Priest Lake**	6/1/2016	Coolin	State	Staffed lookouts	1-on-1	Staffed two lookouts during fire season. Talk to visitors about fire dangers and offer information.	Fire Safety / What IDL does	Smokey materials	Safe and effective wildfire response	Coordinated		2000			Yes		
11	**IDL, Priest Lake**	9/1/2016	Coolin	State	3 Open Houses	Other	Open house at Coolin/Cavanaugh Bay Fire Dept, with a fire engine. Coloring contest for the youngsters.	Fire Safety	Fire prevention materials	Safe and effective wildfire response	Collaborative effort		2500			Yes		
12	**IDL, Priest Lake**	7/16/2016	Coolin	State	Huckleberry Festival	Exhibitor/Booth		Fire Prevention / IDL what we do			Attended		2000		300	Yes		~
13	**IDL, Priest Lake**	8/9/2016	Coolin	State	Bonner County Fair booth	Exhibitor/Booth		Fire safety, prevention and preparedness	Brochures, swag	Safe and effective wildfire response	Attended		5000		1000	Yes		~
14	**IDL, Priest Lake**	9/1/2016	Coolin	State	Smokey & Woodsy Poster Contest	School program	Packets to all teachers and administrators	Contest directions and rules	Preventing fires, taking care of the land	Safe and effective wildfire response	Coordinated		500	500	500	Yes		
15	**IDL, Priest Lake**	10/29/2016	Coolin	State	Bonner County Citizens Preparedness Expo	Exhibitor/Booth	Coordinated booth with Priest Lake Fire Protection District???	Fire Safety	911 magnets (Anything else?)	Safe and effective wildfire response	Attended		110			Yes		
16	**IDL, Priest Lake**	4/1/2016	Coolin	State	Press releases	Media contact / Daily Bee and Priest River Times/local website circulation		Prevention information and Smokey contest updates		Safe and effective wildfire response	Coordinated		5000			Yes		
17	**IDL, Pend Oreille**	5/1/2016		State		School programs	Smokey	Fire Prevention and Safety	Activity Books, Stickers, Posters, ETC	Safe and effective wildfire response	Collaborative Effort		100+	100	100	Yes		
18	**IDL, Pend Oreille**	5/10/2016		State	Issuing burn permits	Educate the public when they get burn permits, May 10-Oct 20		Fire restrictions and safety	Burn permits	Safe and effective wildfire response	Coordinated		*667 (=23% of 2899 permits issued)*			Yes		
19	**IDL, Pend Oreille**	4/1/2016		State	Patrol	1-on-1, occasional		Fire restrictions and safety	Closed Burn Season Magnets	Safe and effective wildfire response	Coordinated		300+			Yes		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
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3						**Meeting, Workshop, Training, Parade, Exhibitor/Booth, School program, 1-on-1, Signage, Media contact, Other**				Resilient landscapes, F. adapted comm., Safe & effective response	Coordinated, Attended, Provided material, Collaborative effort, Other		*(Signage is tough. The # of signs and types of locations helps.)*					
20	**IDL, Pend Oreille**	4/24/2016		State	Signage	Signage	Burn Permit/Prevention Posters	Fire restrictions and safety	Posters	Safe and effective wildfire response	Coordinated		52 Locations @ High Traffic Intersections			Yes		
21	**IDL, Pend Oreille**	4/1/2016		State	Brochures	Other	Idaho Firewise/Bonner County Bonfire Brochures	Defensible space	Idaho Firewise/ Bonner County Bonfire Brochures	Resilient landscapes, F. adapted comm.	Provided Material		100+			Yes		
22	**IDL, Pend Oreille**	7/4/2016		State	4th of July	Parade	Engine/Smokey				Attended		500+		200	Yes		~
23	**IDL, Pend Oreille (PO)**	8/5/2016	Sandpoint	State	Bonner County Fair	Exhibitor/Booth					Attended		700+		150	Yes		~
24	**IDL, Kootenai Valley**	4/29/2016	Bonners Ferry	State	Arbor Day	Exhibitor/Booth	For kids	Fire Prevention	Swag	Safe and effective wildfire response	Attended		100		100	Yes		
25	**IDL, Kootenai Valley**	Annually in May	Boundary County	State	Campfire Safety programs	School programs	Programs given at elementary schools	Campfire safety	Literature	Safe and effective wildfire response	Coordinated		80	80	80	Yes		
26	**IDL, Kootenai Valley**	Annually in May	Boundary County	State	Fire Prevention	School programs	Programs given at elementary schools	Fire prevention		Safe and effective wildfire response	Coordinated		150	150	150	Yes		
27	**IDL, Kootenai Valley**	Annually in June	Naples	State	Home Defensible Space	Meeting	Presentation with South Boundary RFD	Defensible space	Literature, swag	Fire Adapted Communities	Coordinated		30			Yes		
28	**IDL, Kootenai Valley**	Memorial Day, 4th of July	Boundary County	State	Interaction with Public, general fire prevention/ awareness	Parades	4 parades including Memorial Day and 4th of July	???	Swag		Coordinated		2000 total		750	Yes		~
29	**IDL, Kootenai Valley**	8/17/2016	Bonners Ferry	State	Boundary County Fair	Exhibitor/Booth	Smokey mingled with fairgoers	Defensible space	Literature on Firewise and RSG, swag	Fire Adapted Communities	Attended		250		75	Yes		~
30	**IDL, Kootenai Valley**	8/25/2016	Naples	State	Moose Valley Nursery signage	Signage	2 posters on Firewise landscape plants displayed at the nursey and used during presentations				Coordinated		800			Yes		
31	**IDL, Mica**			State	Signage	Signage	Birdhouse signs $700 and 200 hours/year, NFDR signs $500 and 60 hours/year	??? and fire danger level			Coordinated		???			No		
32	**IDL, Mica**	5/9/2016	24 schools in Kootenai County	State	Fire Safety Showdown Skits	School programs	Skits for 1st graders, Smokey visit, goody bags, and drawing for 1 of 2 scooters. $2100 and 200 h/yr	Campfire safety, playing with fire/ fireworks, smoke detectors	Goody bags with ___???	Safe and effective wildfire response	Collaborative effort		1700 total	1700	1700	No		
33		Did this happen in 2016?			Fuels mitigation projects	Other	Shane: Gary Darrington mentioned these projects in an email. He said the next target area is subdivisions on the north side of Lone Mtn	Defensible space		Safe and effective wildfire response			???			No		
34	**IDL, Mica**	Did this happen in 2016?		State	Kids Day in the Park								???			No		
35	**IDL, Mica**	8/24/2016	Coeur d'Alene	State	North Idaho Fair	Exhibitor/Booth	???	???	???	Safe and effective wildfire response	Collaborative effort		???		500	No		~
36	**IDL, Cataldo**	5/1/2016		State	Signage	Signage	48 birdhouse signs $1200 and 160 hours/year, NFDR signs $500 and 60 hours/year	Prevention and fire danger level			Coordinated		???			Started		
37	**IDL, Cataldo**	4/15/2016	___(#) schools in Silver Valley	State	Fire Safety Showdown Skits (?)	School programs	Skits for K-3rd graders, Smokey/Sparky visit, Smokey bags. $300 and 120 h/yr	Campfire safety, playing with fire/ fireworks, smoke detectors (???)	Goody bags with Smokey swag	Safe and effective wildfire response	Collaborative effort		600	600	600	Started		
38	**IDL, Cataldo**		Throughout the Silver Valley	State	???	Parades	About 8 parades/year. $350 and 24 hrs/year				Collaborative effort		???			Started		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
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3						**Meeting, Workshop, Training, Parade, Exhibitor/Booth, School program, 1-on-1, Signage, Media contact, Other**				Resilient landscapes, F. adapted comm., Safe & effective response	Coordinated, Attended, Provided material, Collaborative effort, Other		*(Signage is tough. The # of signs and types of locations helps.)*					
39	**IDL, Cataldo**			State	Various events	???	$400 and 24 hrs/year. Includes safety fair, special requests, press releases. (This year?)						???			Started		
40	**IDL, Cataldo**	9/1/2016	Enaville	State	Bucket Giveaway	1-on-1	Give away 150? Collapsable buckets	Campfire safety	Collapsable buckets, swag	Safe and effective wildfire response	Collaborative effort		~250			Started		
41	**IDL, Cataldo**	5/27/2016	Pinehurst	State	Shoshone Co. Fire Chiefs' Golf Tournament	Fundraiser for Shoshone Coop and Fire Memorial Fund	Annual Golf Tourney fundraiser for Shoshone Coop and Fire Memorial Fund	Helps support all prevention programs	n/a	n/a	Coordinated		Helps in multiple committees (OK, but do you have a number of interactions with the public?)			Started		
42	**IDL, St. Joe**	4/15/2016	St. Maries	State	Smokey school programs	Smokey appearances at the child care facilities	Give presentation on campfire safety	Fire prevention and safety	Swag: rulers, comic books, Smokey bags, etc	Safe and effective wildfire response	Coordinated		50+	50	50	Yes		
43	**IDL, St. Joe**	4/15/2016	Throughout Benewah County	State	Smokey school programs	Smokey prevention programs at the 4 schools for all K-3rd graders: Kids perform a Smokey skit; talk about prevention; Smokey video; Smokey visit		Fire prevention and safety	Smokey goodie bags for all K-3rd graders; awards for Smokey coloring contest winners	Safe and effective wildfire response	Coordinated? OR collaborative effort?		200 total	200	200	Yes		
44	**IDL, St. Joe**	*June???*	Throughout Benewah County	State	Defensible space notices	Media contact	Notices in the newspaper	Home defensible space fuel reduction ideas	Defensible space literature	Fire Adapted Communities	Collaborative effort		4000 total			Yes		
45	**IDL, St. Joe**	May/June	Throughout WSJ FPD	State	Signage	Signage	32 birdhouse signs, 3 large closed fire season/restriction signs	Prevention and fire danger level	Birdhouse signs & Large hanging signs	Safe and effective wildfire response	Coordinated		???			Yes		
46	**IDL, St. Joe**	7/4/2016		State	4th of July, Paul Bunyan Days, etc	Parade	All the major parades		Comic books, candy				1000+		400	Yes		~
47	**IDL, St. Joe**	May 10-Oct 20	IDL WSJ office	State	Closed Burning Season	Other	Issue burn permits	Debris burning safety	Fire safety gloves, Debris burning lit (Think Before You Burn brochure)	Safe and effective wildfire response	Coordinated		??Ask Don?			Yes		
48	**IDL, Ponderosa**	Prior to May 10th	Whole district	State	Prevention / Closed Burning signs	Signage	District wide closed burning season signs. Additional "GUBERIF" and "Your Fuels Your Problem" signs as well.	Closed burning, fire safety, fuels around structures	N/A	Safe and effective wildfire response	Coordinated		30-5- signs, checked annually prior to May 10; 5 large swing signs at high recreation areas			Yes		
49	**IDL, Ponderosa**	2 days in May, 2016	Spring Valley	State	Conservation Awareness Days	School programs	Fire safety, and safe and effective fire response for Latah County youth	Fire traingel, campfire safety, wildland fire response	Smokey supplies	Safe and effective wildfire response	Instructed	Fire engine and 2 firefighters. Coordinated w other Latah Co outdoor programs	100-150 students	150	150	Yes		
50	**IDL, Ponderosa**	9/16/2016	Camp Grizzly	State	Colfax Outdoor Education Days	School programs	Fire safety, and safe and effective fire response for Latah County youth	Fire traingle, campfire safety, wildland fire response, history of 1910 fires	Smokey supplies	Safe and effective wildfire response	Instructed	Fire engine and 2 firefighters. Coordinated w other Latah Co outdoor programs	50-75 students	75	75	Yes		
51	**IDL, Ponderosa**	8/15/2016	Deary	State	Deary Days Parade	Parade	Provide an engine + firefighters to walk/drive in parade	Safe and effective wildfire response	Candy	Safe and effective wildfire response	Attended	N/A	100		25	Yes		~
52	**IDL, Ponderosa**	N/A	N/A	State	County LEPC activities	N/A	N/A	N/A	N/A	N/A	Other	Participate. Coordinated by Latah Co. LEPC	?			Yes		
53	**IDL, Ponderosa**	9/15/2016	Moscow	State	Moscow Safety Fair	Exhibitor/Booth	2 firefighters, display booth, Smokey swag, prevention material	Closed burning, fire safety, Firewise	Smokey swag, Firewise info, responsible burning info	Safe and effective wildfire response	Attended	N/A	200			Yes		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
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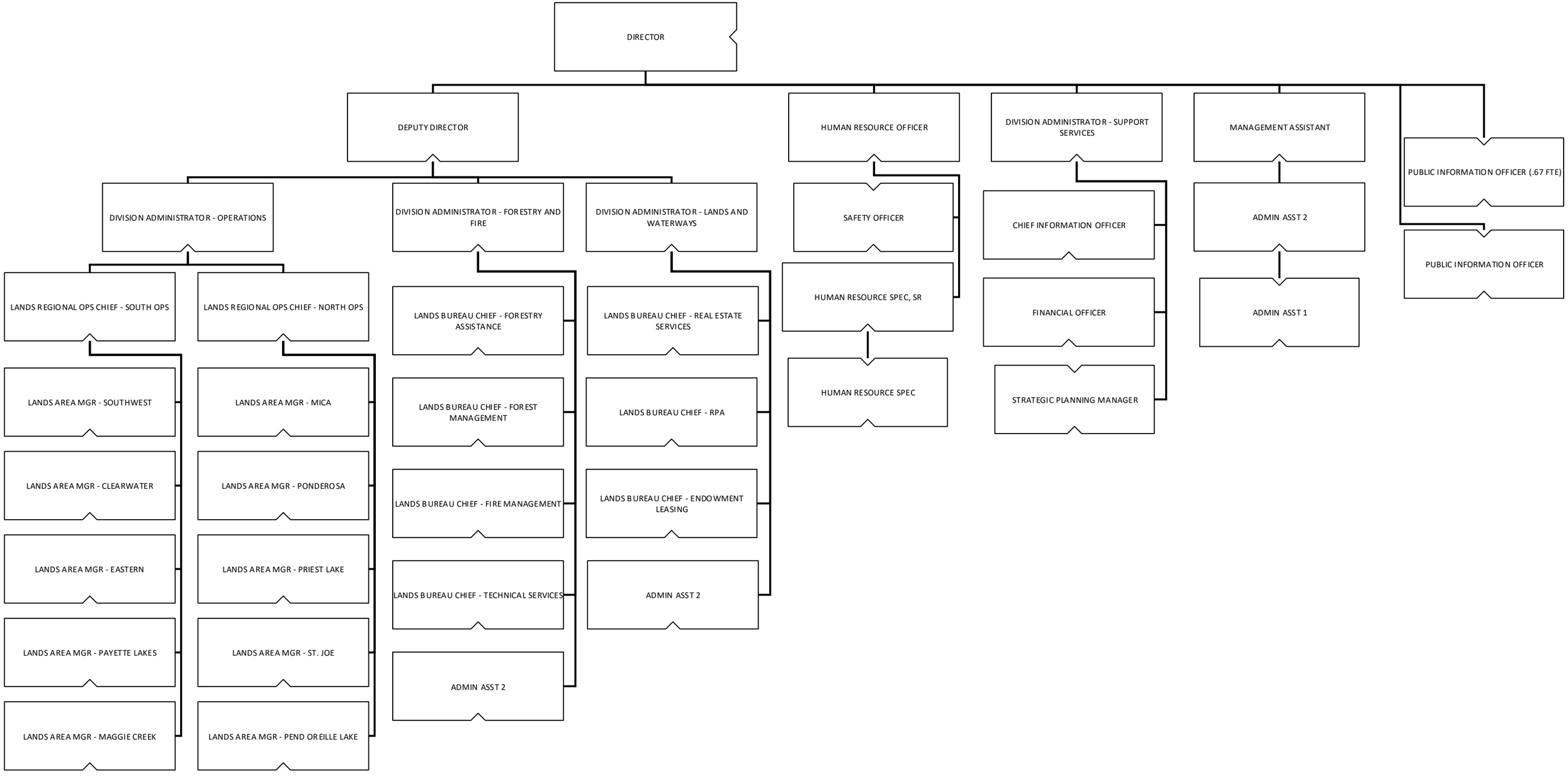
3						**Meeting, Workshop, Training, Parade, Exhibitor/Booth, School program, 1-on-1, Signage, Media contact, Other**				Resilient landscapes, F. adapted comm., Safe & effective response	Coordinated, Attended, Provided material, Collaborative effort, Other		*(Signage is tough. The # of signs and types of locations helps.)*					
54	**IDL, Maggie Creek**	4/10/2016		State	Fire Field Days	School program	Give presentation for 4th-5th graders at 2-3 elementary school Fire Field Days.	Prevention and fire wise		Safe and effective wildfire response	Collaborative effort		100 total	100	100	Yes		
55	**IDL, Maggie Creek**	4/15/2016		State		School programs	Give presentations at the 2 preschools; Smokey visit	Prevention; fire safety		Safe and effective wildfire response	Collaborative effort		40 total	40	40	Yes		
56	**IDL, Maggie Creek**	4/15/2016	Around the district	State	Signage	Signage	3 sign loops along very busy highways and on back roads	Closed fire season signs; prevention posters		Safe and effective wildfire response	Coordinated		1000+			Yes		
57	**IDL, Maggie Creek**	8/4/2016	Kamiah and Kooskia	State	Kamiah and Kooskia Day Parades	Parades	Participate in parades	Prevention	Packets for kids	Safe and effective wildfire response	Attended	Participated with USFS	500		200	Yes		~
58	**IDL, Maggie Creek**	6/25/2016	N. Central Idaho, S WA	State	Newspaper insert	Media contact	Helped produce newspaper insert for the Lewiston Tribune, $150	Living With Fire	Newspaper insert	Fire Adapted Communities	Collaborative effort	Collaborated with N. Central Co-op	25,000			Yes		
59	**IDL, Craig Mountain**	4/15/2016		State	Signage	Signage	72 sites where birdhouse signs are posted, mostly on access intersections. Takes a crew 2 days to post them; build new birdhouse poster shelters as needed	Closed fire season			Coordinated		Post 72 signs along major routes into the larger timbered areas, especially endowment land			Yes		
60	**IDL, Craig Mountain**	4/29/2016		State	Arbor Day, Camp Whitman, Career Day, tree planting	Exhibitor/Booth	Various events. Camp Whitman is a school program				Collaborative event		>100	100	100	Yes		
61	**IDL, Craig Mountain**	5/15/2016		State	School Field Days	School programs	Grades 5, 6 and 7?? Run stations, sometimes cooperatively with the FS	**ARE THESE THE SAME THING?**			Collaborated with USFS		>200	200	200	Yes		
62	**IDL, Craig Mountain**	?		State	Allison Creek Field Day	School program	5th-6th grade program. Led an activity at a station.	**ARE THESE THE SAME THING?**			Collaborated with Maggie Creek and USFS		>100	100	100	Yes		
63	**IDL, Craig Mountain**	6/11/2016	Culdesac	State	Shebang Days	Parade		Prevention	Smokey swag	Safe and effective wildfire response	Attended		~6000 for all the parades		2000	Yes		~
64	**IDL, Craig Mountain**	6/20/2016	Craigmont	State	Craigmont June Picnic	Parade					Attended					Yes		
65	**IDL, Craig Mountain**	7/3/2016	Winchester & Lewiston	State	Winchester Days and Rodeo, Lewiston Round-up, Nez Perce & Lewis Co Fairs	Parades	Rodeos and fairs				Attended					Yes		
66	**IDL, Southwest**	4/15/2016		State	Signage	Signage	A fair amount of signage. Had a dragging chain birdhouse sign created.				Coordinated		2700? (2700 is my estimate. They said, "30/day > 100s?" I'm guessing it's mostly summer)					
67	**IDL, Southwest**	7/4/2016	Idaho City	State	4th of July Parade	Parade	2 engines attended				Attended		500		250			~
68	**IDL, Southwest**			State		Other	A limited amount of patrolling	Fire restrictions and safety		Safe and effective wildfire response			200					
69	**IDL, Southwest**			State		1-on-1	Had Prevention Kits created. Distributed contents during informal conversations w public	Fire danger, Prevention, Defensible space	Literature, swag	Safe and effective wildfire response	Coordinated		0					
70	**IDL, Southwest**	9/6/2016	Boise	State	Poster	Media contact	Worked with IDL's FP&E Coordinator to produce a poster on equipment and dragging chains	Equipment safety	Poster	Safe and effective wildfire response	Coordinated		0					

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	**Worksheet #2, Prevention Details** -- Prevention coordinators, please complete/correct for your ADA																	
2	**ADA**	**Date** (or start date) of event (approx is OK)	Location of event	Reporting agency	**Name of event**	**Type of event (See choices below)**	**Explanation** of "Other" type of event, or more info	**Topics covered**	Type of material distributed	Event best matches (See choices below)	Involvement (See choices below)	Explanation of "Other" involvement, or more information	**** Approx number of interactions w/ people ****	# of student interactions	# of children interactions	Include ADAs input?	**SEE TAB #1**	
3						**Meeting, Workshop, Training, Parade, Exhibitor/Booth, School program, 1-on-1, Signage, Media contact, Other**				Resilient landscapes, F. adapted comm., Safe & effective response	Coordinated, Attended, Provided material, Collaborative effort, Other		*(Signage is tough. The # of signs and types of locations helps.)*					
71	**IDL, Southwest**	6/24/2016	Boise	State	Press conference	Media contact		Wildfire awareness in WUI, and fire season preparation			Collaborated	With USFS and BLM	5000					
72	**Additional events that SW is sometimes involved in, but they didn't take place in 2016:**																	
73	IDL, Southwest		Placerville	State		Other	Open house						???					
74	IDL, Southwest	8/9/2016		State	Smokey's Birthday Party; Citadel Kids Fair (winter) (cancelled due to fire activity)	Other	Kids' events	Prevention		Safe and effective wildfire response			???					
75	IDL, Southwest					Table Rock Challenge (running race) (Cancelled due to fire activity & low registration)							???					
76	**IDL, Eastern**	Since we are not a district we don't do any of this														Yes		
77	**CPTPA**			Non-profit	Signage	Signage	Birdhouse signs and NFDR level signs	Fire restrictions, danger level, _____?			Coordinated		???			Yes, but they didn't answer my questions		
78	**CPTPA**			Non-profit	Lewiston Roundup Parade, 1860 Days Parade, etc	Parades	Attend all local parades with 1914 Model T White, and Smokey. A lot of time spent on parades.				Collaborative effort		???			Yes		
79	**CPTPA**		Did this happen in 2016?	Non-profit		School programs	Sporadic	Prevention					???			Yes		
80	**CPTPA**			Non-profit	6th Grade Forestry Tour	School programs	Every year	Prevention			Collaborative effort		???			Yes		
81	**CPTPA**		Did this happen in 2016?	Non-profit	Orofino Chamber of Commerce mtg, etc	Meeting	WUI presentations with University of Idaho & EMS. 1-3/year	WUI, defensible space presentations		Fire adapted communities	Collaborative effort		???			Yes		
82	**CPTPA**		Did this happen in 2016?	Non-profit			Local events, sporadic				Collaborative effort		???			Yes		
83	**CPTPA**		Did this happen in 2016?	Non-profit		Other			Prevention packages (are these distributed at some of the above events?)		Collaborative effort		???			Yes		
84	**SITPA**	8/15/2016	Cascade, ID	Non-profit	Valley County Fair	Booth	Educate the public on fire safety	Fire safety	Smokey handouts	Safe and effective wildfire response	Collaborative effort	Cascade FS, City of Cascade	100+		25	Yes		~
85	**SITPA**	11/15/2016	Mccall, ID	Non-profit	Valley County Hazardous Fueld Reduction Program	Other	Reduce hazardous fuels next to property boundary creating a fuel break. 1500 acres, 80-100 homes	Definsible space		Fire adapted communities	Coordinated		~200			Yes		
86	**SITPA**	12/15/2016	Mccall ID	Non-profit	Winter Survival Days	School Program	Educate children on fire safety and techniques of starting a fire	Fire safety	Smokey handouts	Safe and effective wildfire response	Collabrated effort	Mccall MS	100+	100	100	Yes		
87														4545	18,545.00			

APPENDIX C IDL Organizational Chart

(See next page.)

Director's Office – Updated 3/1/2017



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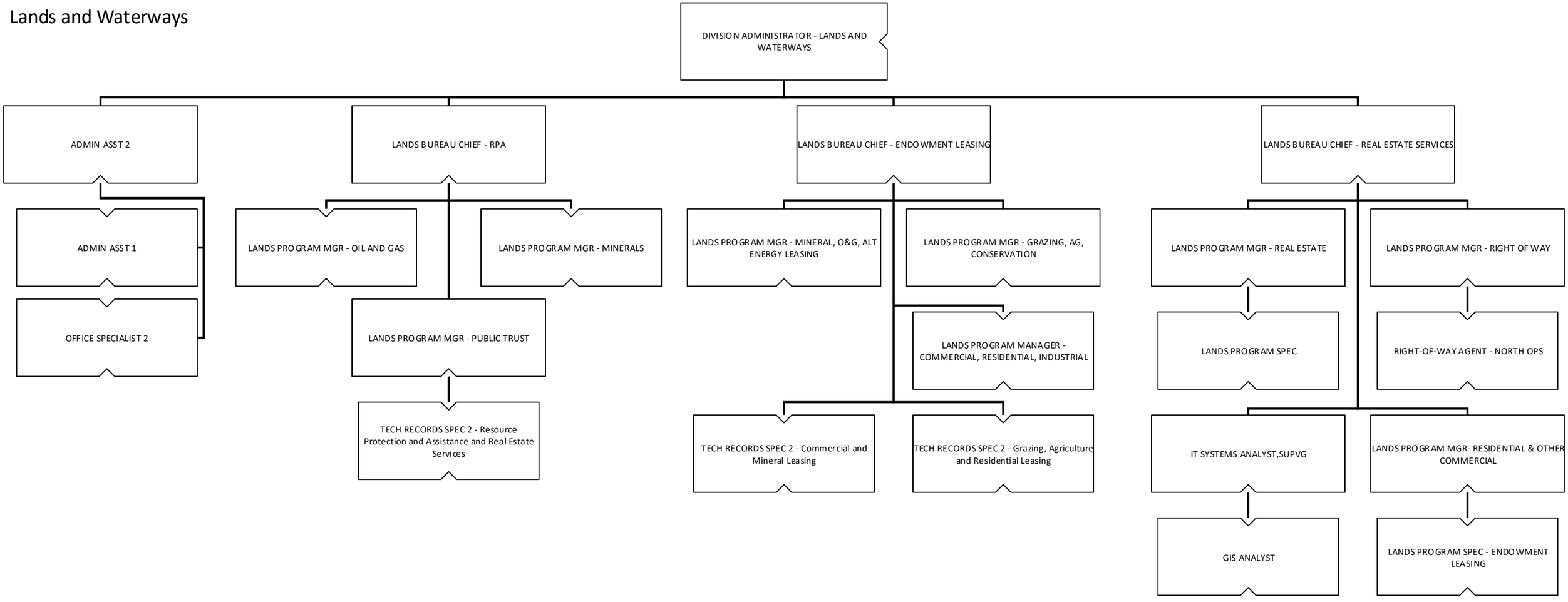
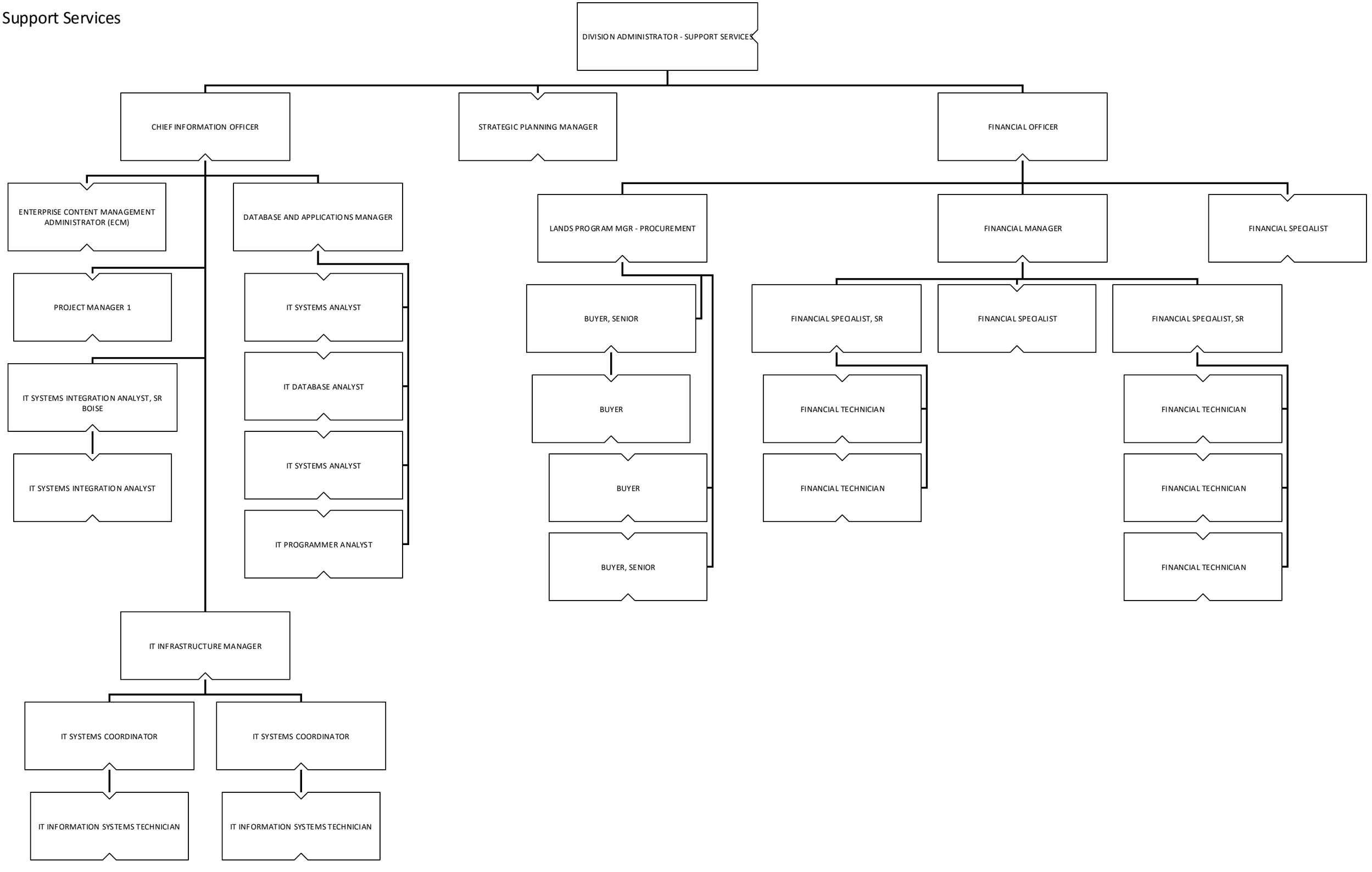


Support Services



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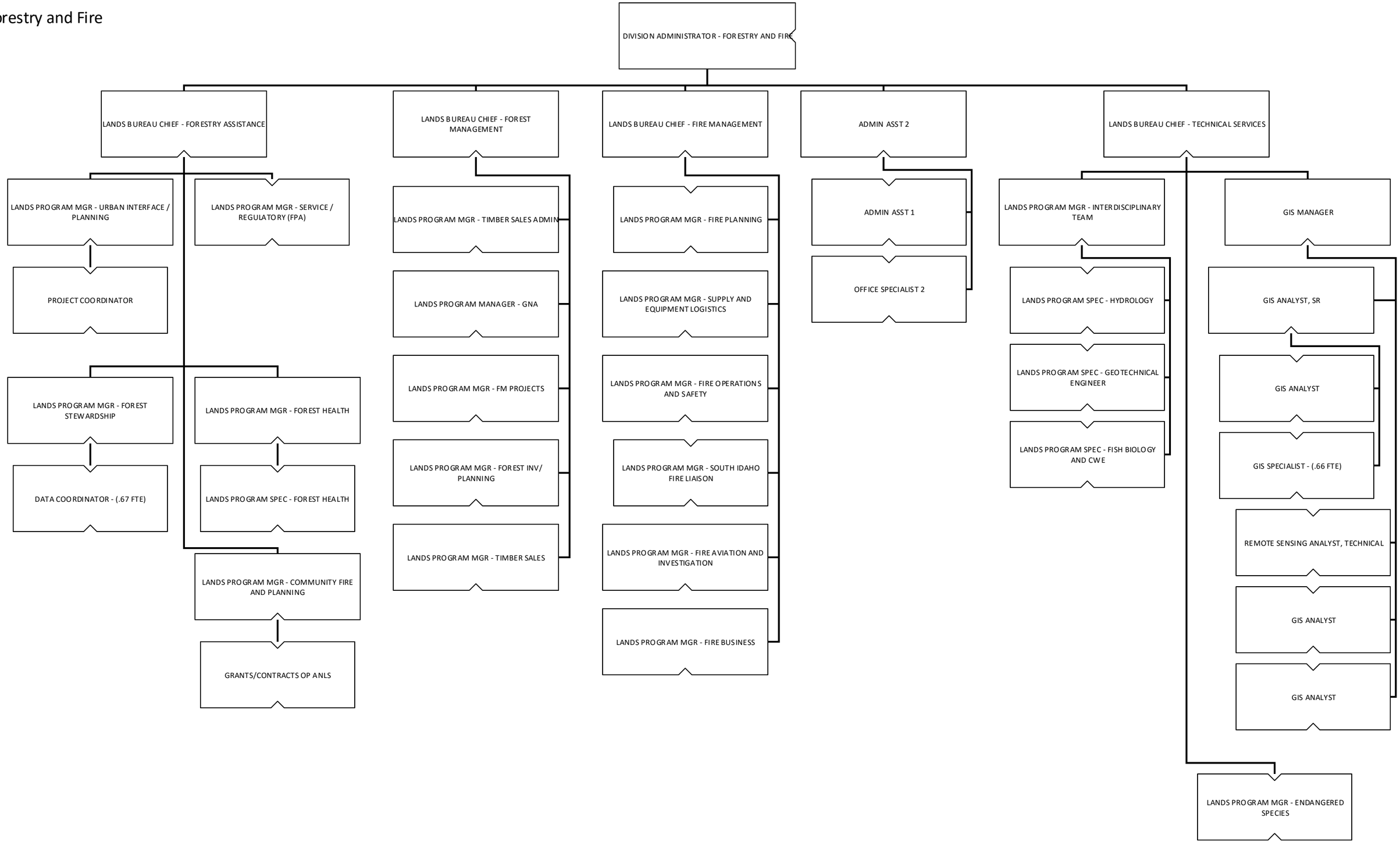
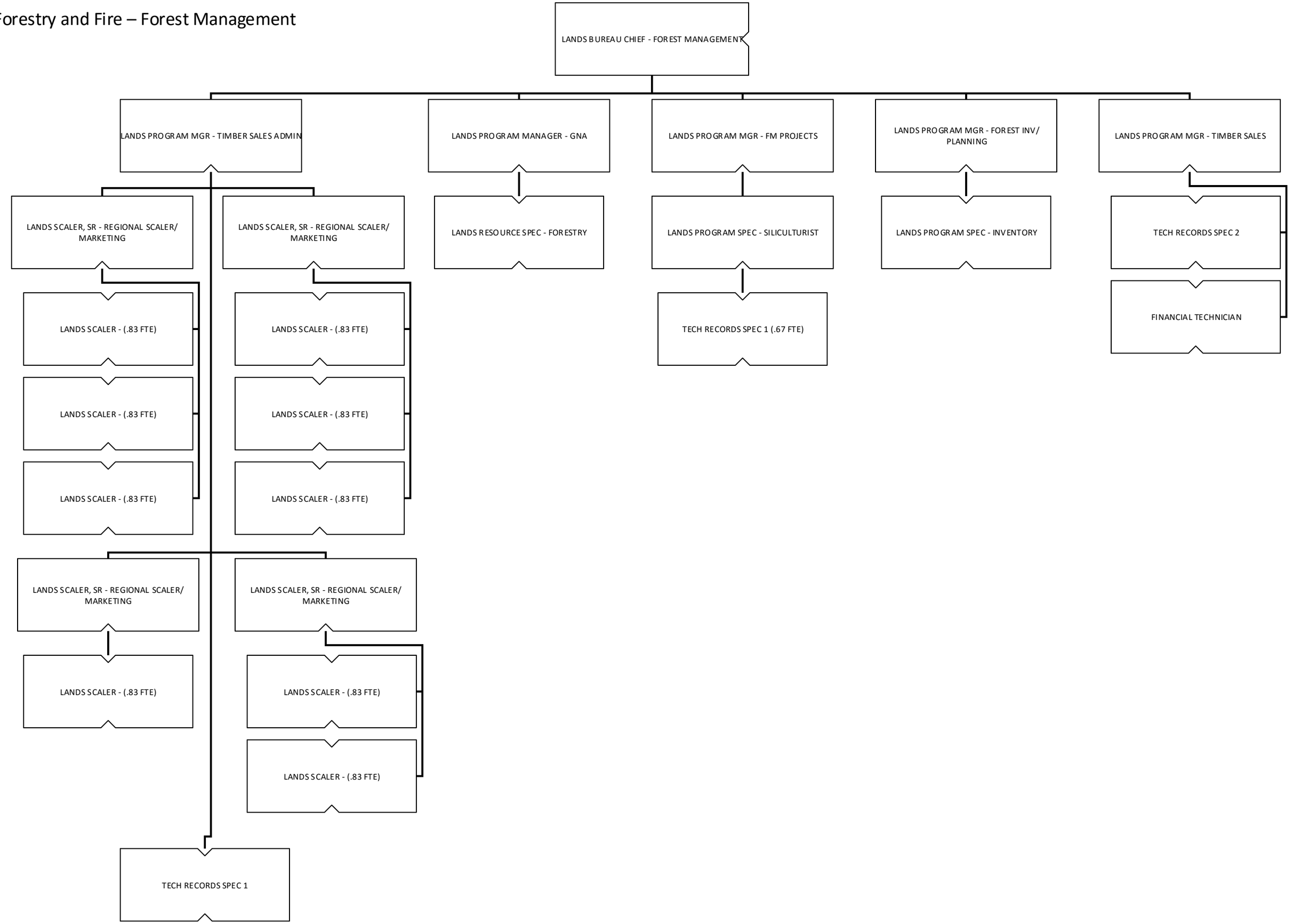
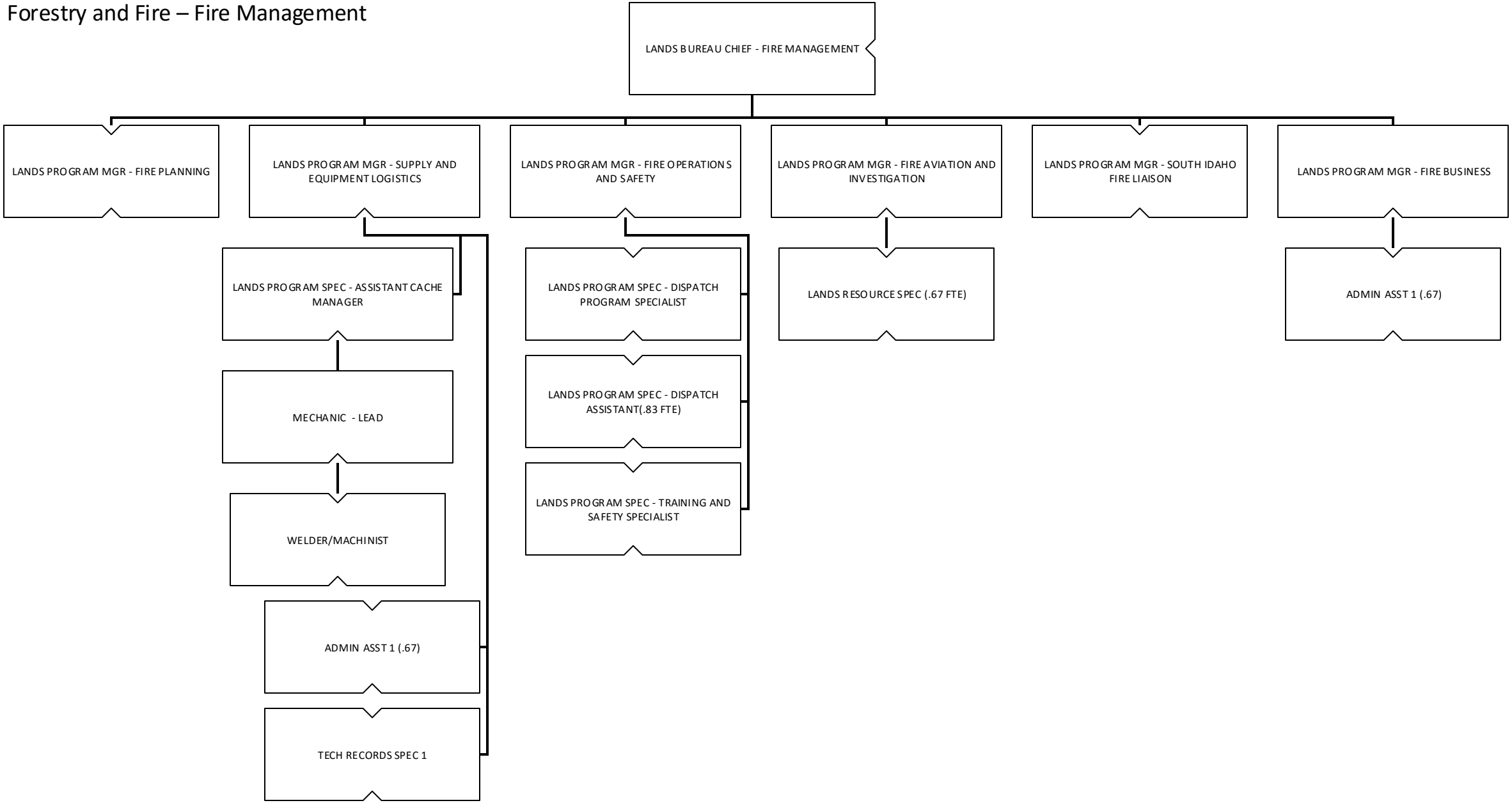


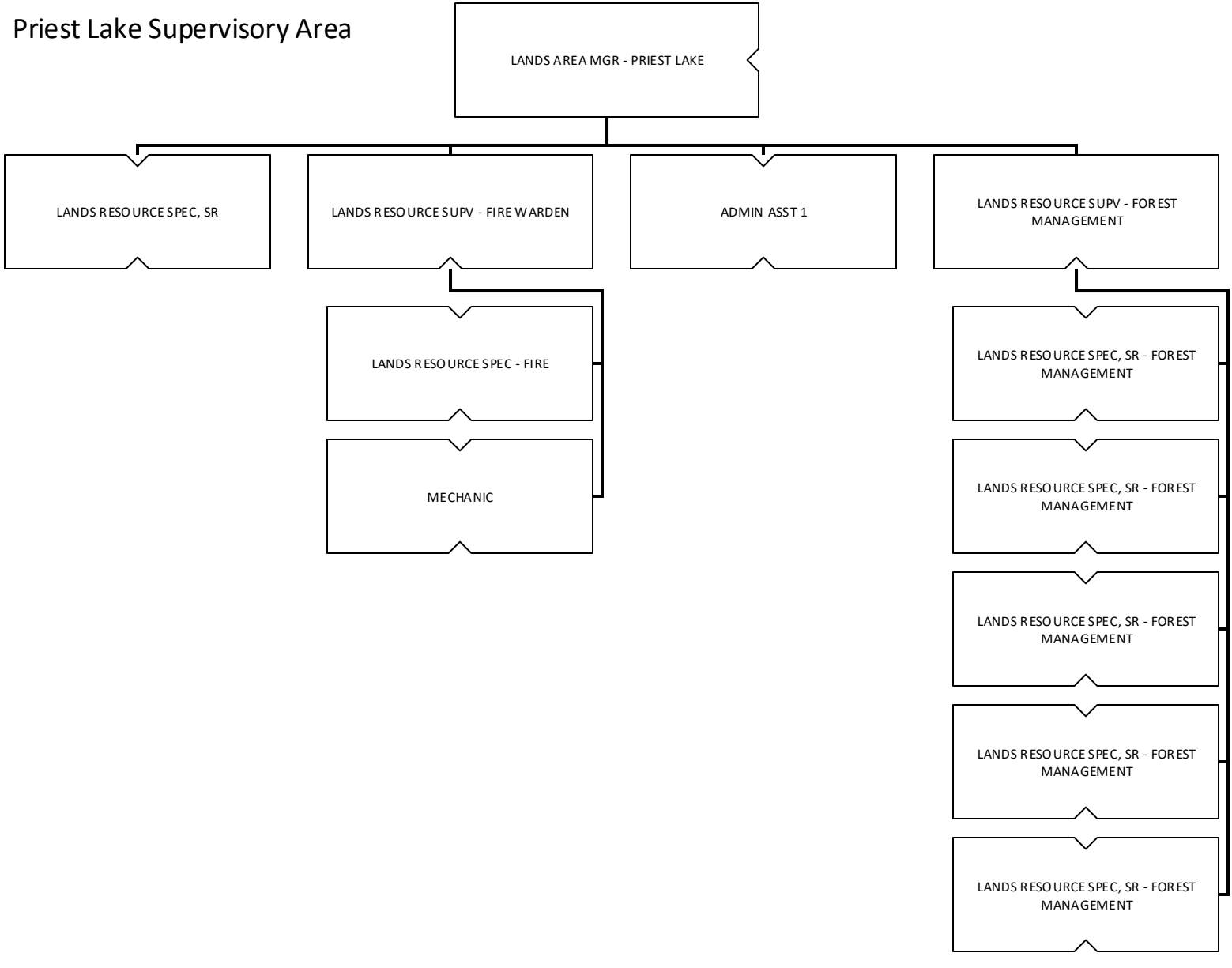
Forestry and Fire – Forest Management



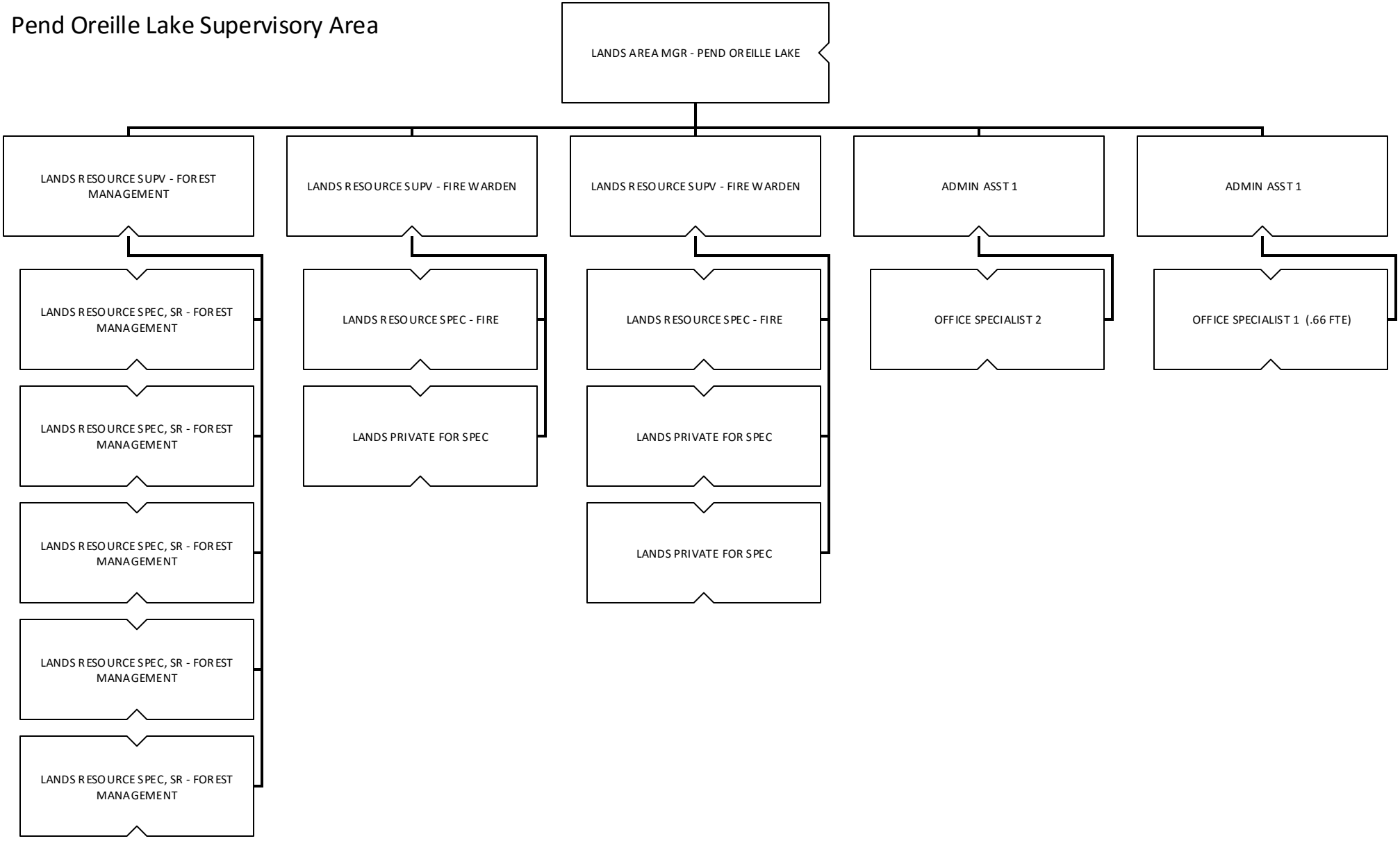
Forestry and Fire – Fire Management



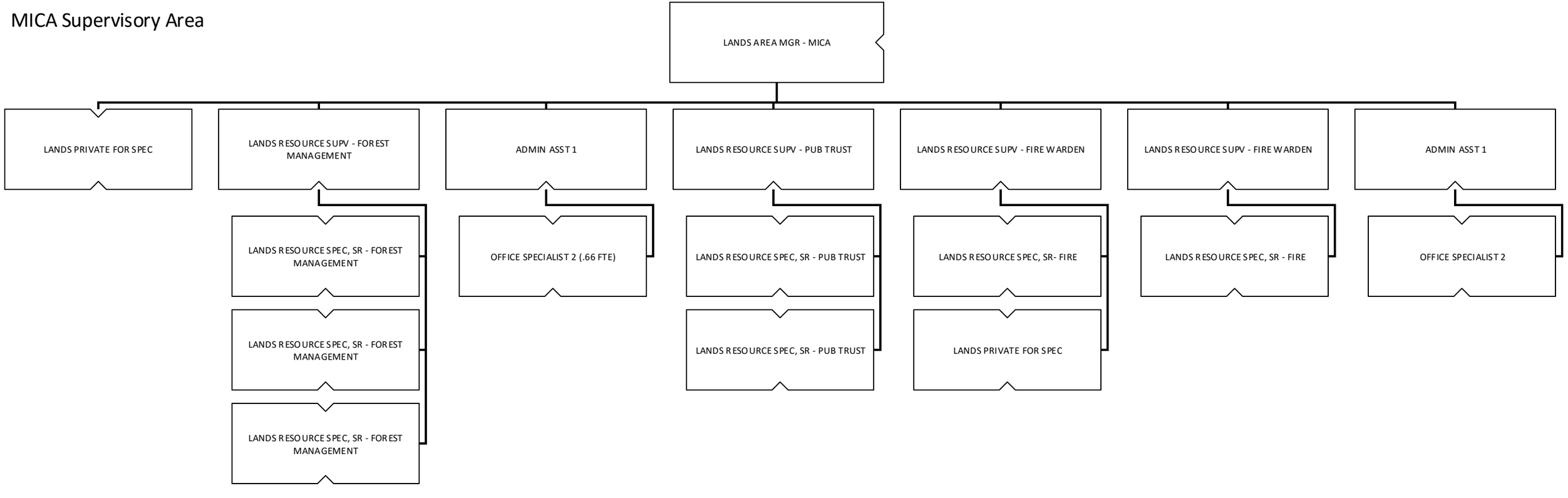
Priest Lake Supervisory Area



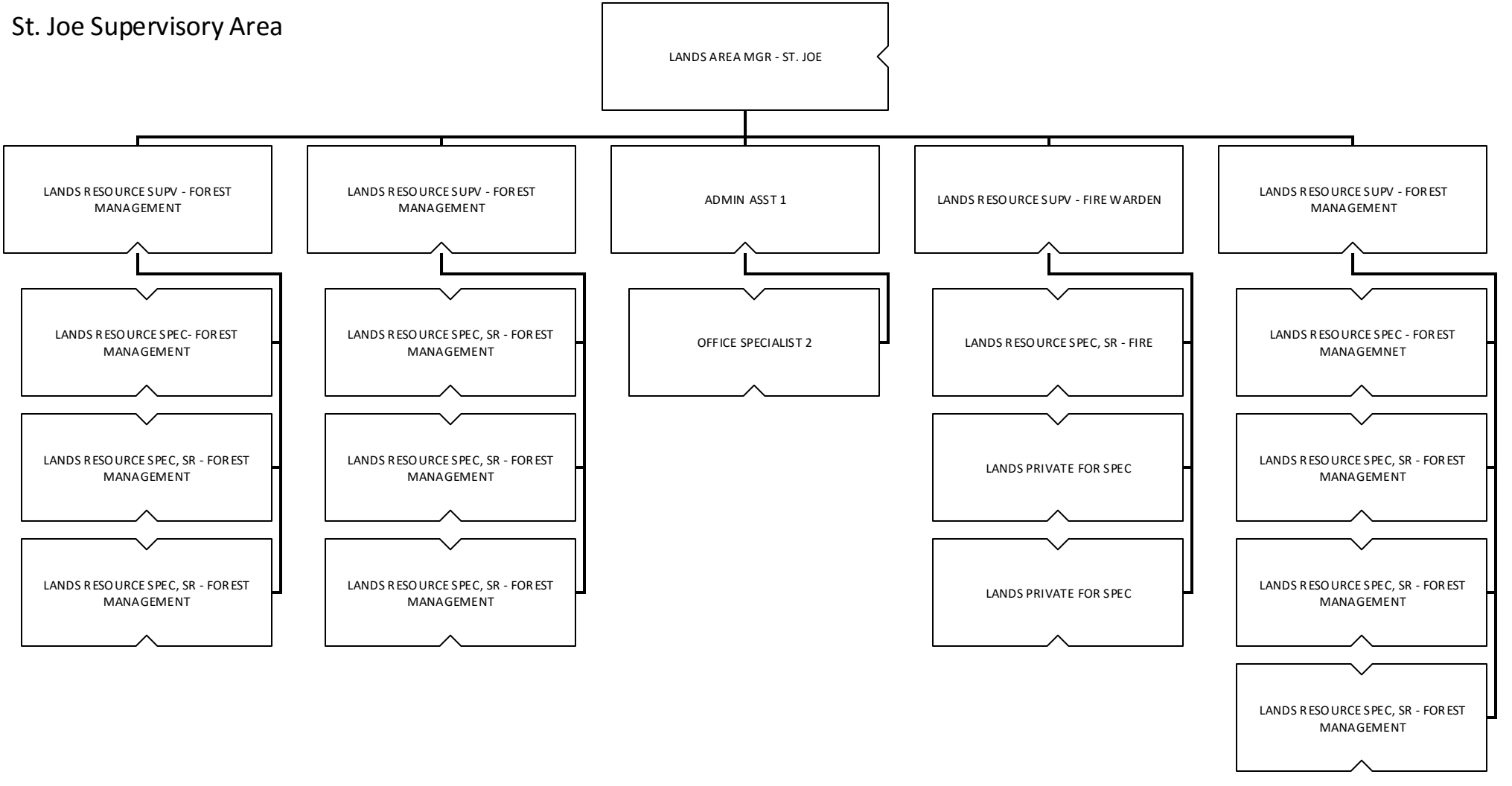
Pend Oreille Lake Supervisory Area



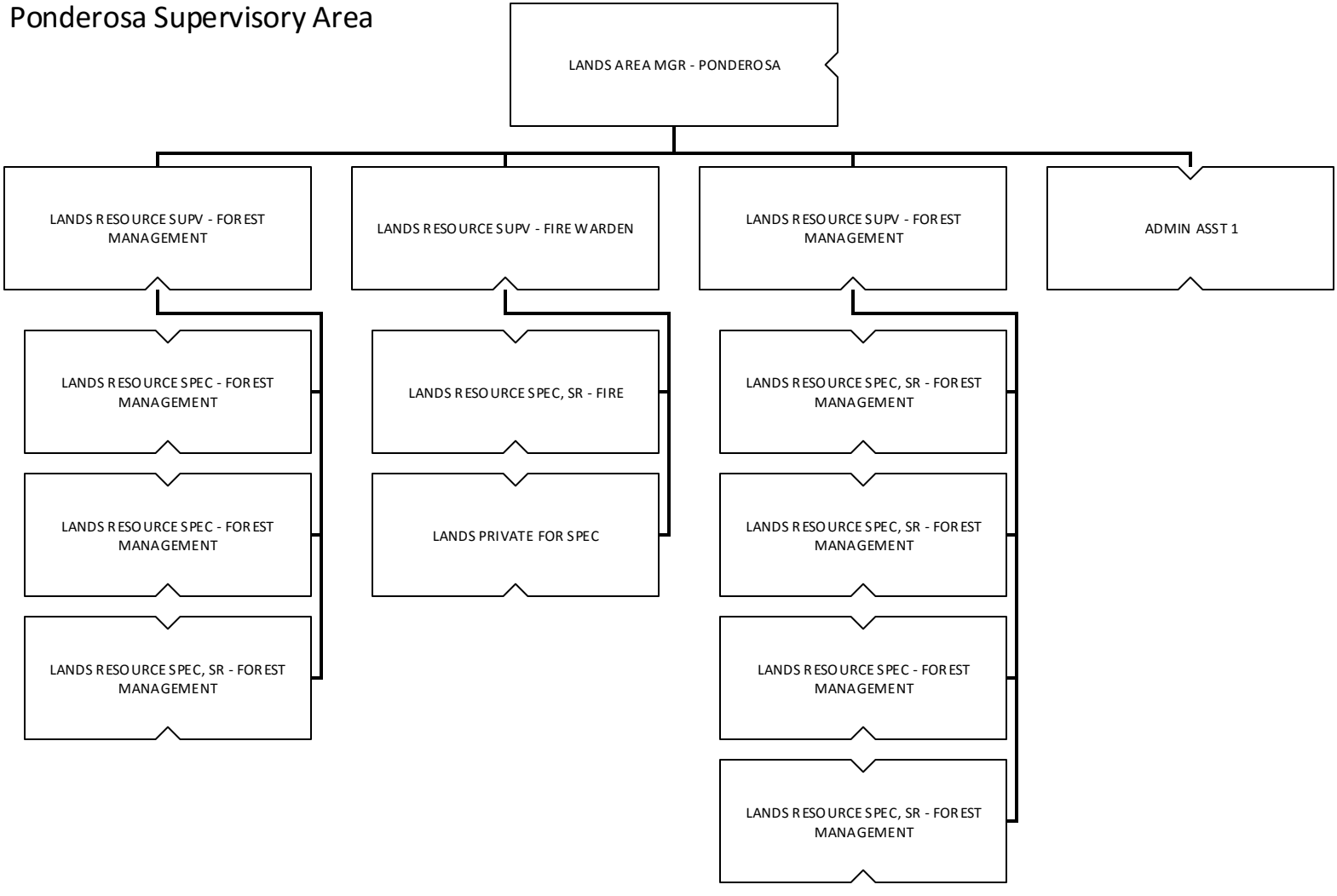
MICA Supervisory Area



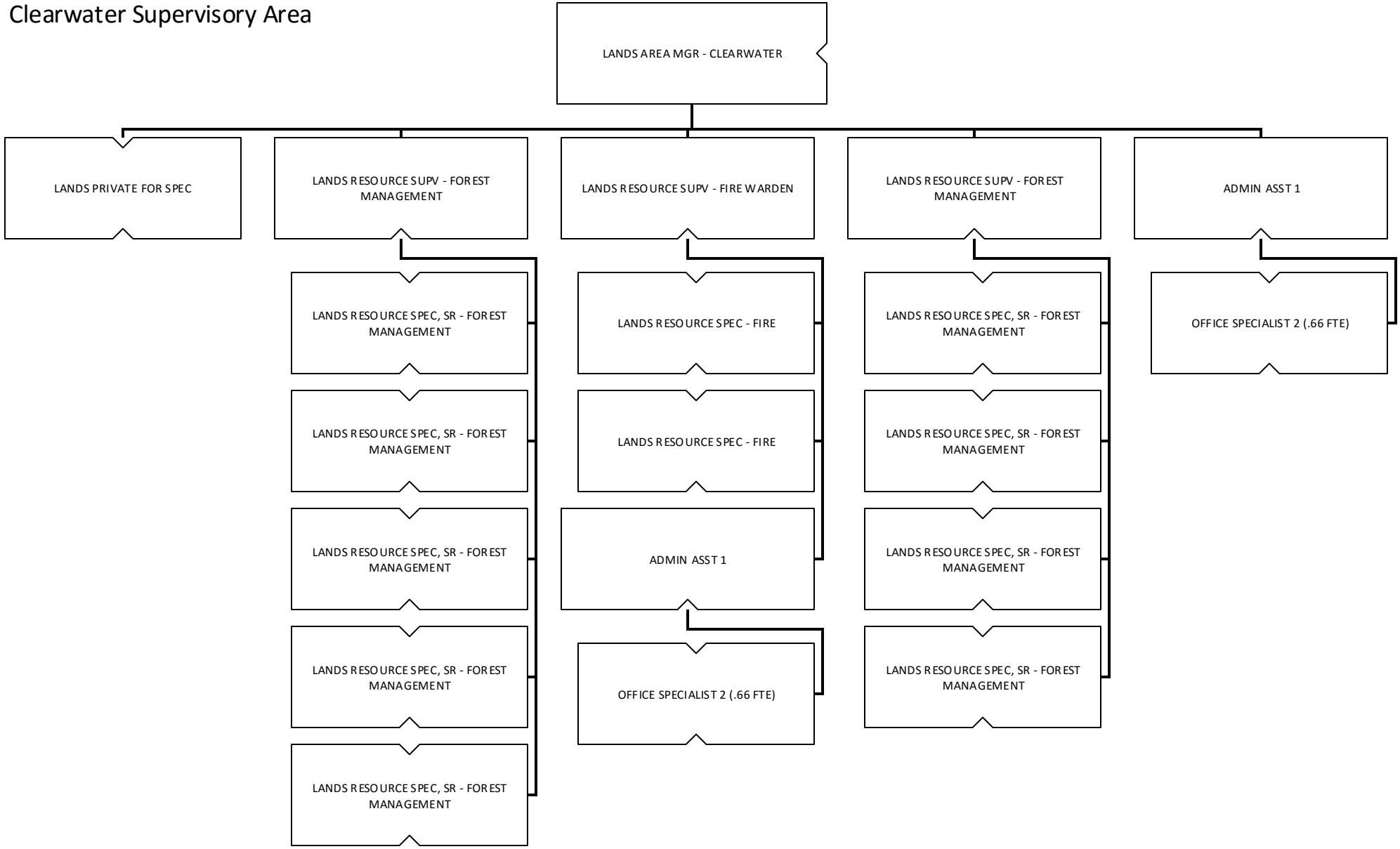
St. Joe Supervisory Area



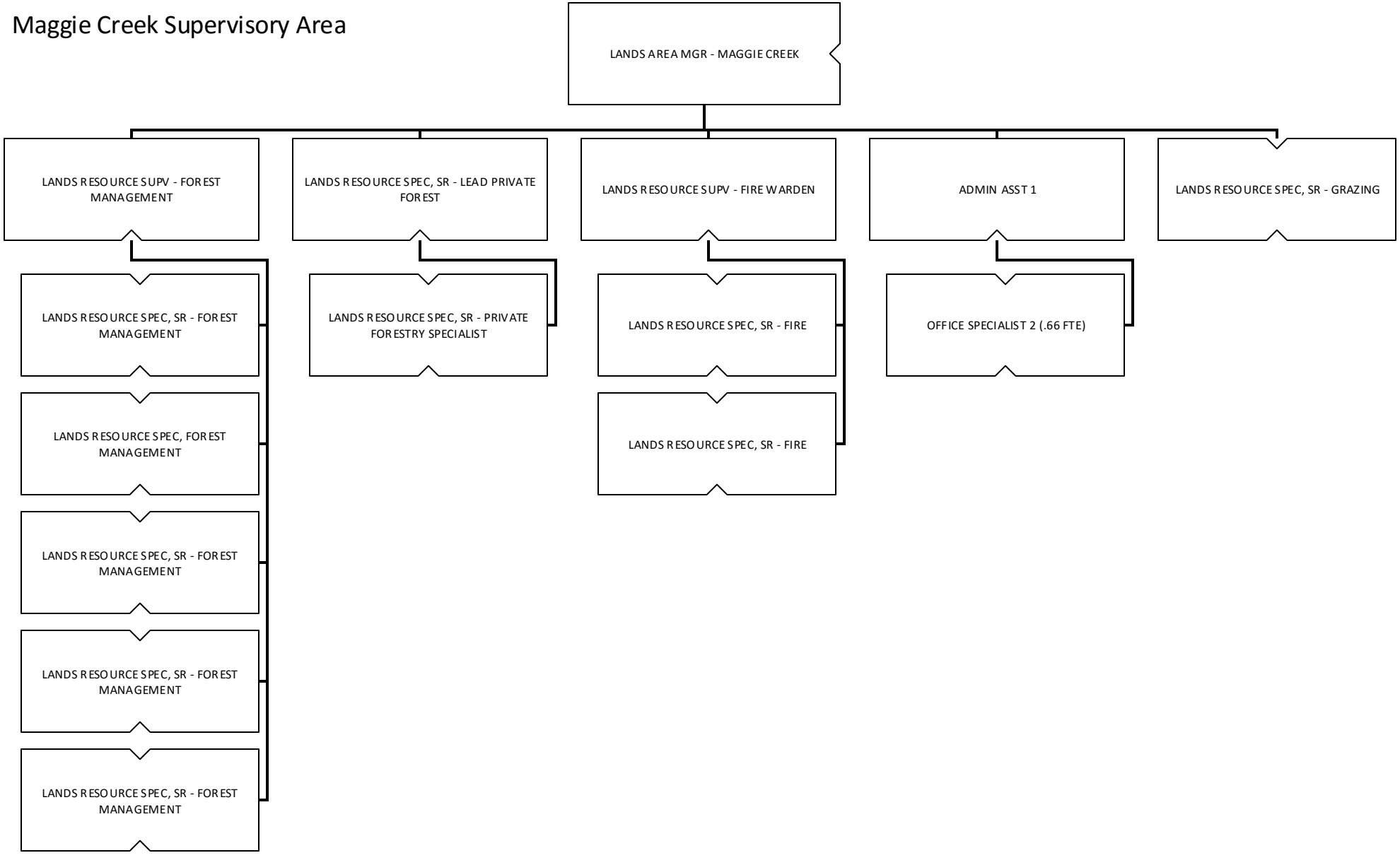
Ponderosa Supervisory Area



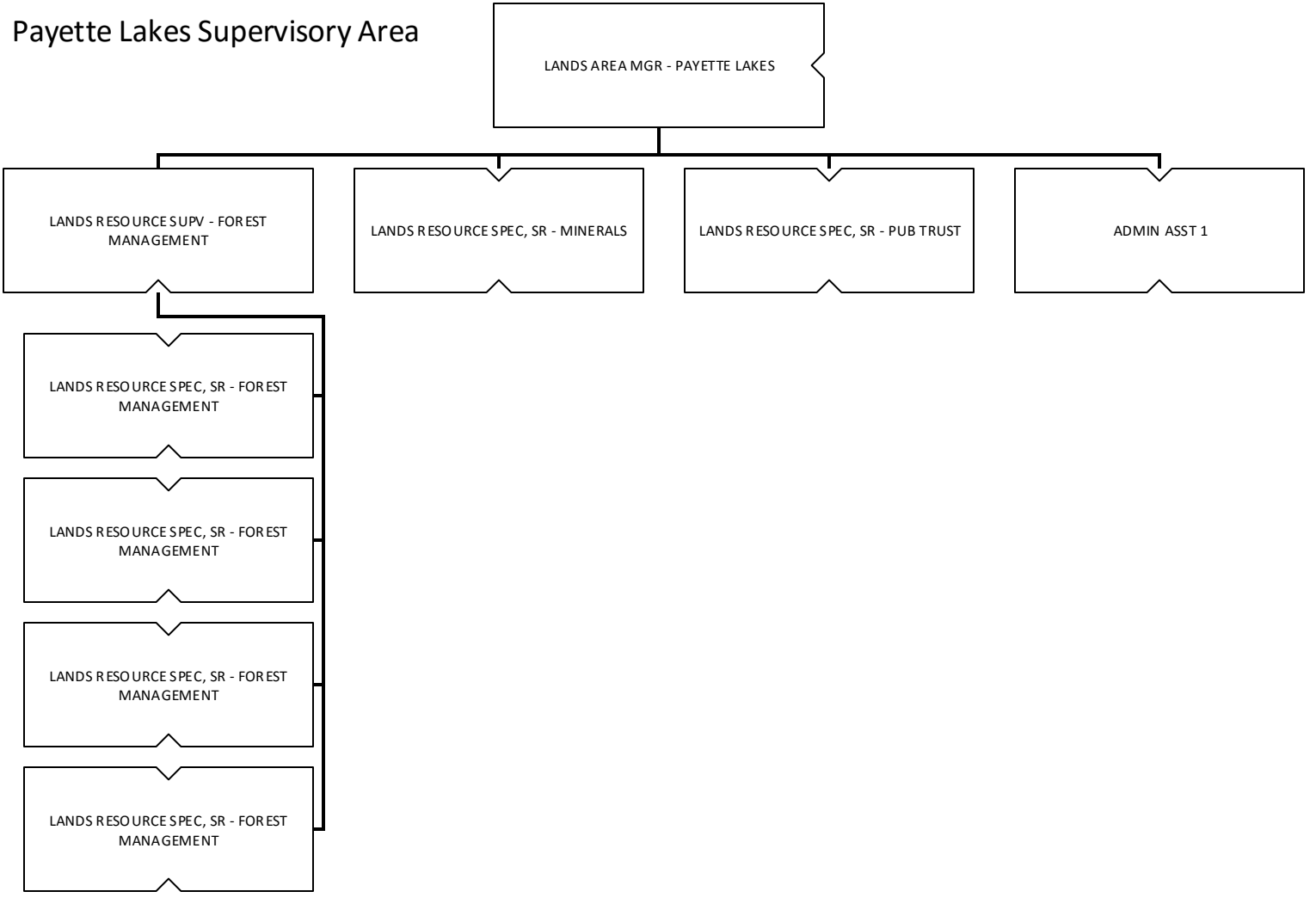
Clearwater Supervisory Area



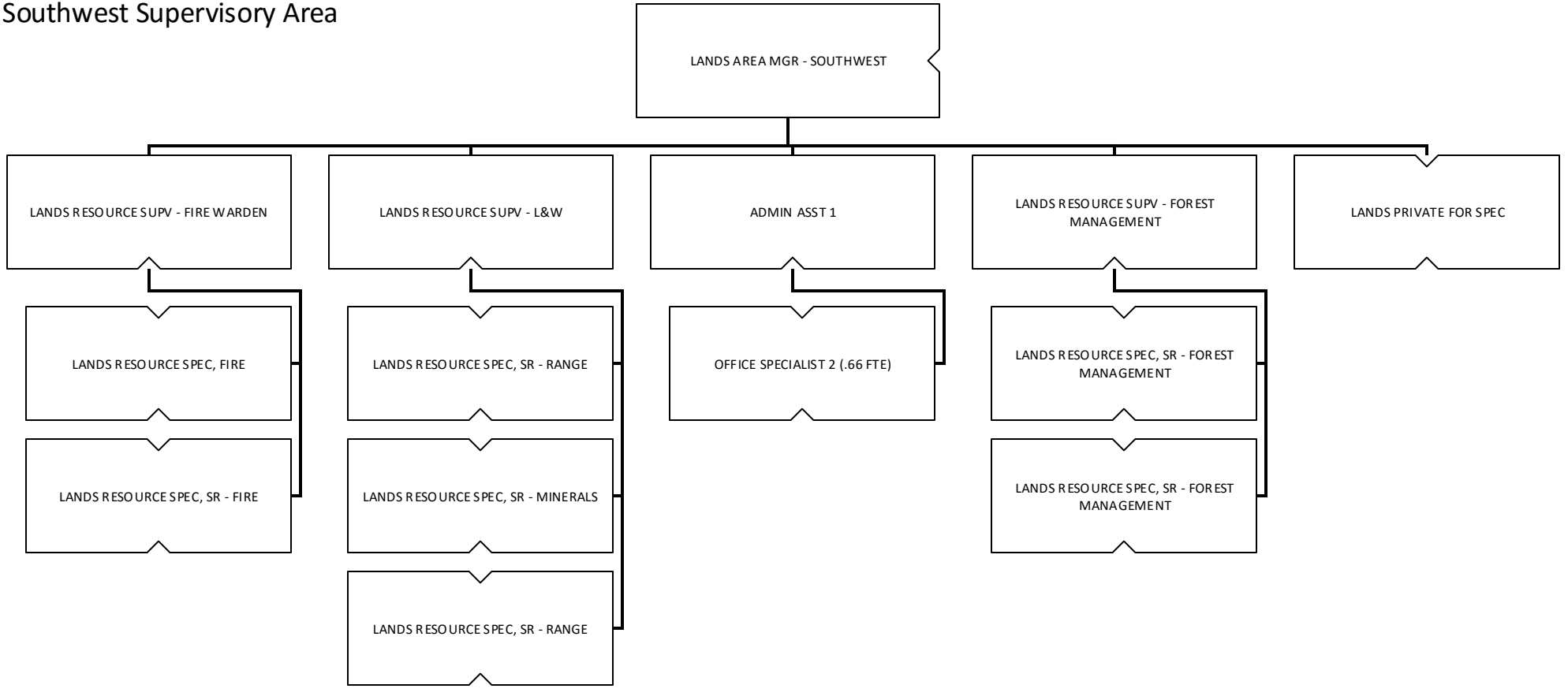
Maggie Creek Supervisory Area



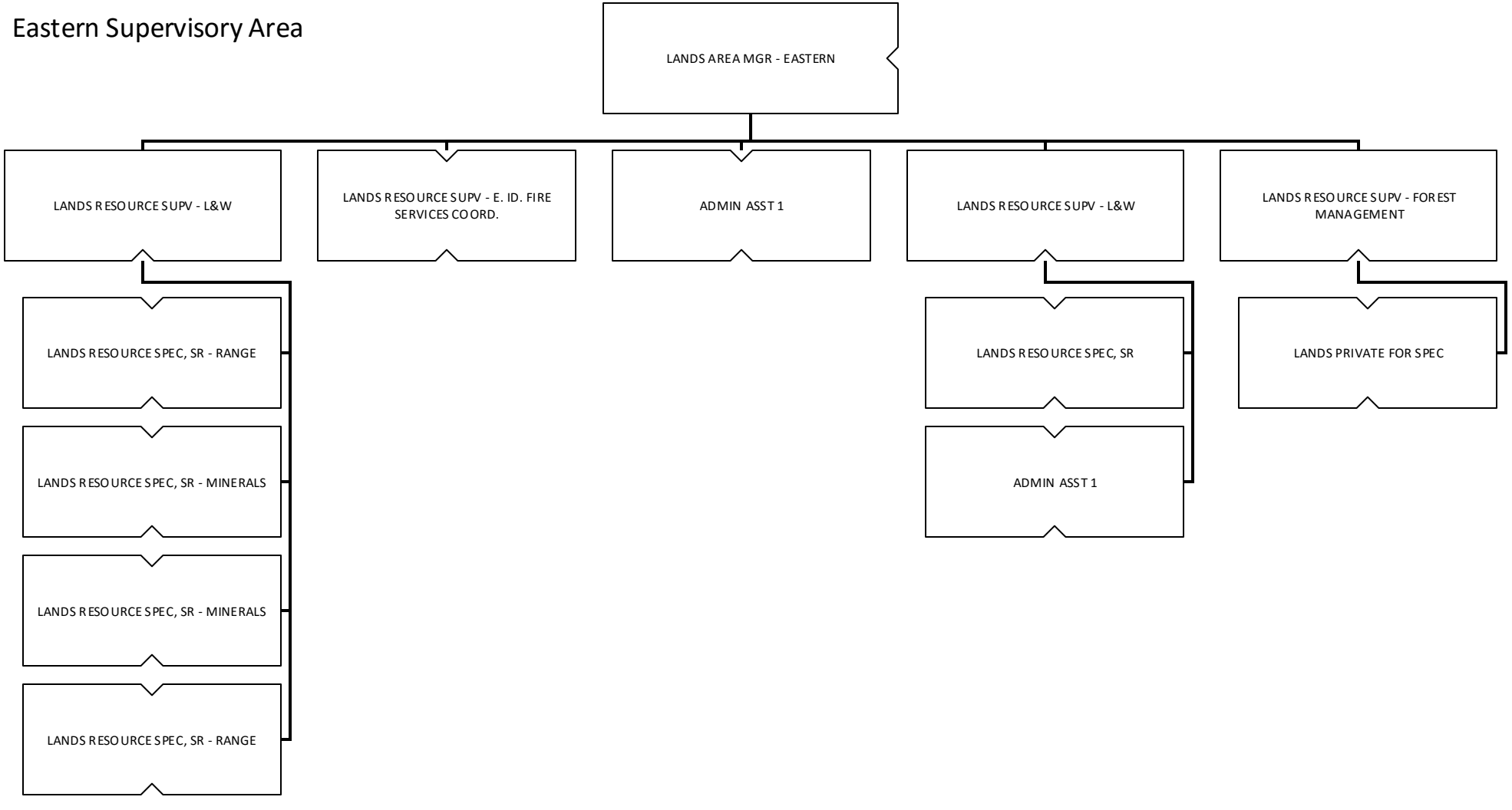
Payette Lakes Supervisory Area



Southwest Supervisory Area



Eastern Supervisory Area



APPENDIX D NRCC 2016 Operating Agreement

(See next page.)

2016 AERIAL FIRE DEPOT ANNUAL OPERATING PLAN
to
COOPERATIVE FIRE PROTECTION AGREEMENT
#13-FI-11015200-003
Between
the
MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION,
the
IDAHO DEPARTMENT OF LANDS,
the
NATIONAL PARK SERVICE, INTERMOUNTAIN REGION, YELLOWSTONE AND GLACIER NATIONAL PARKS,
the
BUREAU OF INDIAN AFFAIRS, PACIFIC NORTHWEST AND ROCKY MOUNTAIN REGIONS,
the
US FISH & WILDLIFE SERVICE, MOUNTAIN-PRAIRIE AND PACIFIC REGIONS,
and the
USDA FOREST SERVICE, NORTHERN AND INTERMOUNTAIN REGIONS

This Annual Operating Plan (AOP) is hereby made and entered into by and between the Montana Department of Natural Resources and Conservation, hereinafter referred to as DNRC, the Idaho Department of Lands, hereinafter referred to as IDL, USDI Bureau of Land Management, Montana, hereinafter referred to as BLM-MT , the National Park Service, Intermountain Region, Yellowstone and Glacier National Parks, hereinafter referred to as NPS-YNP and NPS-GNP, Bureau of Indian Affairs, Pacific Northwest And Rocky Mountain Regions, hereinafter referred to as BIA-NW and BIA-RM, the US Fish & Wildlife Service Mountain-Prairie, and Pacific Regions, hereinafter referred to as FWS-Mountain-Prairie, and the USDA Forest Service, Northern and Intermountain Regions, hereinafter referred to as FS-R1 and FS-R4 under the provisions of the Economy Act of June 30, 1932 (31 U.S.C. 1535, Pub. L. 97-258 and 98-216), the Reciprocal Fire Act of May 27, 1955 (42 U.S.C. 1856a, Public Law 84-46), Service First P.L. 106-291, as amended by P.L. 109-54, title IV, Section 428, Cooperative Funds Act of June 30, 1914, and the Granger Thye Act of 1950. The parties may be collectively referred to as the agencies.

IT IS MUTUALLY AGREED AND UNDERSTOOD BY AND BETWEEN THE PARTIES THAT:

The attached Exhibits are replaced for operating season October 1, 2015 through September 30, 2016. Any reimbursement identified in the Financial Plan between the agencies will be facilitated through separate agreements.

The authority and format of this modification has been reviewed and approved for signature by:

/s/ Meg Nemitz
MEG NEMITZ
U.S. Forest Service, Grants Management Specialist
Region One, Western Montana

6/10/16
Date

In witness whereof, the parties hereto have executed this AOP as of the last date written below.

Those parties exchanging funds as specified under this AOP may initiate separate agreements after all of their signatory officials have signed and dated this AOP.

Michael T. DeGrosky — 6/17/16

MICHAEL T. DEGROSKY, Bureau Chief — Date
Montana Department of Natural Resources and Conservation

J.T. Wensman — 6/23/16

JT WENSMAN, Fire Bureau Chief — Date
Idaho Department of Lands

Ralph G. Rau — 6/22/16

RALPH RAU, Director of Fire, Aviation & Air — Date
USDA Forest Service, Northern Region

ROBERT LAPLANT, Regional Director — Date
USDI Bureau of Indian Affairs Rocky Mountain Region

STEVE HEPPNER, Regional Fire Management Officer — Date
USDI Bureau of Indian Affairs, Pacific Northwest Region

Ken Schmid — 6/21/16

KEN SCHMID, Fire Management Officer — Date
USDI Bureau of Land Management -Montana

MIKE GRANGER, Fire Management Officer — Date
US Fish & Wildlife Service, Mountain-Prairie Region

NORA B. RASURE, Regional Forester — Date
USDA Forest Service, Intermountain Region

BRENT WOFFINDEN, Fire Management Officer — Date
USDI National Park Service, Intermountain Region

NORTHERN ROCKIES COORDINATING GROUP BOARD OF DIRECTORS
June 10, 2016

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NRCG Business Manager
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EXHIBIT D
Administrative Contacts

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BLM-MT Joni Taylor BLM- Montana and Dakotas State Office 5001 Southgate Dr Billings, MT 59101 406-896-5185 406-896-5299 (fax) jltaylor@blm.gov	BLM-ID Chris Shaver BLM – Idaho State Office 1387 S Vinnell Way Boise, ID 83709-1657 208-373-3817 208-373-3915 christine_shaver@blm.gov
NPS-Intermountain Linda Turner NPS – Intermountain Region PO Box 25287 Denver, CO 80225 303-969-2948 Linda_Turner@nps.gov	BIA-NW Brian Tonihka BIA - Pacific Northwest Region 911 NE 11th, Portland, OR 97232 503-231-6759 503-866-0017 (cell) 503-231-6817 (fax) Brian.Tonihka@bia.gov
BIA-RM Amanda Boatright BIA – RMRO- Forestry & Fire 316 North 26th Street Rm 4017 Billings, MT 59101 406-247-7949 406-247-7921(fax) amanda.boatright@bia.gov	FWS-Mountain-Prairie Amy Kamen FWS - Mountain Prairie Region PO Box 25486 Denver Federal Center Denver, CO 80225-0486 303-236-4305 303-236-4792 (fax) Amy_Kamen@fws.gov
FS-R1 Meg Nemitz Grants & Agreements Specialist-Western MT 24 Fort Missoula Road Missoula, MT 59804 Phone: 406-329-1008 FAX: 406-329-3876 mwasienkoholland@fs.fed.us	FS-R4 Carla Pickering Grants & Agreements Specialist 324 25th Street Ogden, UT 801-625-5812 801-625-5327 (fax) carlapickering@fs.fed.us
FS-R1 Ryan Patrick Budget & Financial Plan USDA Forest Service, Northern Region – AFD 5765 W Broadway St Missoula, MT 59808 Phone: 406-829-7372 FAX: 406-329-4955 ryanpatrick@fs.fed.us	

FY16 NRCG Operating Plan
Summary
October 1, 2015 through September 30, 2016

Unit	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND	Totals
NRCC	92,500	238,600	131,200		142,500	86,250	553,950		1,245,000
NRCG Support							318,800		318,800
NRCG Operations		157,200							157,200
NRCG Contracting							182,800		182,800
NRTC	99,500						431,700		531,200
OTHER							105,200		105200
Total	**192,000**	**395,800**	**131,200**	-	**142,500**	**86,250**	**1,592,450**	-	**2,540,200**
Percentage Contribution	7.6%	15.6%	5.2%	0.0%	5.6%	3.4%	62.7%	0.0%	100.0%

Agency Fair Share Percentages

Units	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND	Total
NRCC and NRCG Support(1)	5%	8%	1%	4%	10%	3%	68%	0.02%	100%
Operations (2)	10%	30%	5%	5%	10%	5%	35%	0.00%	100%
Contracting (3)	5%	8%	1%	4%	10%	3%	68%	0.02%	100%
Smoke (4)	0%	20%	10%	0%	0%	0%	70%	0.00%	100%
Safety (5)	10%	30%	10%	0%	0%	10%	40%	0.00%	100%
NRTC (6)	7%	7%	1%	4%	7%	2%	72%	0.09%	100%
Exchange of funds:									
DNRC pays BLM MT		(30,000)			30,000				
IDL pays FS R1				18,000			(18,000)		
Total Costs per Agency after funds transferred	192,000	365,800	131,200	18,000	172,500	86,250	1,574,450	-	2,540,200
Percentage	7.6%	14.4%	5.2%	0.7%	6.8%	3.4%	62.0%	0.0%	100.0%

*Region 4 FS pays Region 1 FS 35% of Erin Law's Smoke costs - $34,615

**Information and supporting documentation for the Agencies' revised financials can be found on the attached "Defining the New Fair Share."

FY16 NRCG Financial Plan Summary

Agency Fair Share Percentages

Agency	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND
NRCC and NRCG Support(1)	5%	8%	1%	4%	10%	3%	68%	0.02%
Operations (2)	10%	30%	5%	5%	10%	5%	35%	0.00%
Contracting (3)	5%	8%	1%	4%	10%	3%	68%	0.02%
Smoke (4)	0%	20%	10%	0%	0%	0%	70%	0.00%
Safety (5)	10%	30%	10%	0%	0%	10%	40%	0.00%
NRTC (6)	7%	7%	1%	4%	7%	2%	72%	0.09%

Agency Fair Share Costs

Agency	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND	**Totals**
NRCC and NRCG Support(1)	83,598	126,400	15,370	67,469	150,961	50,996	1,033,921	285	1,529,000
Operations (2)	15,720	47,160	7,860	7,860	15,720	7,860	55,020	0	157,200
Contracting (3)	9,995	15,112	1,838	8,066	18,048	6,097	123,611	34	182,800
Smoke (4)	0	21,040	10,520	0	0	0	73,640	0	105,200
Safety (5)	3,480	10,440	3,480	0	0	3,480	13,920	0	34,800
NRTC (6)	35,790	38,042	5,138	21,532	37,811	9,467	382,958	462	531,200
Total Fair Share	**148,583**	**258,193**	**44,205**	**104,928**	**222,540**	**77,900**	**1,683,069**	**780**	**2,540,200**
Total Fair Share Percentage	**6%**	**10%**	**2%**	**4%**	**9%**	**3%**	**66%**	**0.03%**	**100%**

Agency Contributions

Agency	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND	**Total**
Amount Contributed	192,000	395,800	1,592,450	0	131,200	86,250	142,500	0	**2,540,200**
Percentage Contribution	8%	16%	63%	0%	5%	3%	6%	0%	100%

Agency Payments

Agency	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND
Contribution Fair Share Difference	43,417	137,607	1,548,245	(104,928)	(91,340)	8,350	(1,540,569)	(780)
Payments	0	(30,000)	0	18,000	30,000	0	(18,000)	0
Percentage Contribution After Payments	8%	14%	63%	1%	6%	3%	5%	0%

Updated Costs by Unit

Units	**Totals**
NRCC and NRCG Support (1)	1,529,000
NRCG Operations (2)	157,200
NRCG Contracting (3)	182,800
Smoke (4)	105,200
Safety (5)	34,800
NRTC (6)	531,200
Total Costs	**$2,540,200**

FY15 Costs by Agency When Agencies Pay Own Resources

Sum of Total				Owner Agency						
Unit	Position	Name	FTE	BIA	BLM JR	BNRC	FS	FWS RS	NPS	Grand Total
NRCC	AFD Support Costs	AFD Support Costs	0				76,500			76,500
	Facilities Maint	Facilities Maint	0				33,200			33,200
	Meteorologist	Henry, Bryan	1		128,800					128,800
		Mike Richmond	1					131,200		131,200
	NRCC Automation Clerk	Vacant	0				-			-
	NRCC Forestry Technician	Vacant GS-7	0				-			-
	NRCC Interagency Support	NRCC Interagency Support	0				10,000			10,000
	Center Manager	Pipkin, Kathy	1				125,200			125,200
	Assistant Center Manager	Heintz, Judy	1		109,800					109,800
	Direct Protection Coordinator	Gemmell, Harold	1			90,000				90,000
	Intelligence Coordinator	Polutnik, Julie	1				101,800			101,800
	Aircraft Dispatcher	Thomas, Kimberly	1				115,800			115,800
	Operations Coordinator	Vacant- Operations Coordinator	1	92,500						92,500
	Dispatch Leader	Robinson, Roy	0.75			52,500				52,500
	Intelligence Assistant	Jolly, Pam	1						86,250	86,250
	Assistant Coordinator	Vacant- Assistant Coordinator	0.69				61,250			61,250
	Lead Dispatch / Contracting	Whiteman, Barb	0.5				30,200			30,200
NRCC Total				**92,500**	**238,600**	**142,500**	**553,950**	**131,200**	**86,250**	**1,245,000**
NRCG Support	AFD Support Costs	AFD Support Costs	0				13,900			13,900
	Facilities Maint	Facilities Maint	0				3,200			3,200
	Computer Specialist	Vice Hackney, Tyler	0.5				54,500			54,500
	IT Specialist	Murphy, Patrick	0.5				41,900			41,900
	IMT Materials & Supplies	IMT Materials & Supplies	0				20,000			20,000
	Lifecycle Management	Lifecycle Management	0				20,000			20,000
	Executive Assistant	Ortman, Kitty	0.5				59,700			59,700
	Ground Safety	Zachry, Steve	0.25				34,800			34,800
	Fire Equipment Specialist	Vice Erickson, Kevin	0.5				55,500			55,500
	IMT Support	IMT Support	0				15,300			15,300
NRCG Support Total							**318,800**			**318,800**
NRCG Operations	Fire Operations	Gilman, Bob	1		157,200					157,200
NRCG Operations Total					**157,200**					**157,200**
NRCG Contracting	AFD Support Costs	AFD Support Costs	0				12,300			12,300
	Best Value Contracting	Best Value Contracting	0				37,600			37,600
	Facilities Maint	Facilities Maint	0				2,800			2,800
	NRCG Contact or Liaison	Murphy, Tim	1				130,100			130,100
NRCG Contracting Total							**182,800**			**182,800**
NRTC	AFD Support Costs	AFD Support Costs	0				57,900			57,900
	Facilities Maint	Facilities Maint	0				33,200			33,200
	NRTC Assistant Director	Wegner, Melissa	1				120,800			120,800
	NRTC Forestry Technician	Gibson, Matt	1				92,200			92,200
	NRTC Prog Coord	Lemire, Rosie	1				97,700			97,700
	NRTC Supply Technician	Dana, Tara	0.5				29,900			29,900
	NRTC Training Coord	Reevis, Mary	1	99,500						99,500
NRTC Total				**99,500**			**431,700**			**531,200**
OTHER	AFD Support Costs	AFD Support Costs	0				5,100			5,100
	Facilities Maint	Facilities Maint	0				1,200			1,200
	Smoke Mgt Program Coord	Law, Erin	0.83				98,900			98,900
OTHER Total							**105,200**			**105,200**
Grand Total				192,000	395,800	142,500	1,592,450	131,200	86,250	2,540,200

Defining the New Fair Share

- NRCC and NRCG Support(1)

Units	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND
NRCC and NRCG Support(1)	6%	8%	1%	4%	10%	3%	68%	-

- Volume of business is based on 10-year rolling average of resource requests processed by the NRCC.
- This is all resource requests In and Out of Northern Rockies.
- These percentages exclude requests placed by agencies not listed above.

- NRCC and NRCG Support(1)

2006 – 2015 10-Year NRCC Volume of Business (As of 10/31/15)

Resource Requests by Agency for Use In NR (%)			Resource Requests by Agency for Use Outside NR (%)			Resource Requests by Agency for Use In and Out of NR (%)		
BIA	5,258	6%	BIA	1,791	4%	BIA	7,049	5%
BLM	4,919	5%	BLM	5,739	12%	BLM	10,658	8%
FWS	265	0%	FWS	1,031	2%	FWS	1,296	1%
IDS	5,451	6%	IDS	238	0%	IDS	5,689	4%
MTS	12,729	14%	MTS	0	0%	MTS	12,729	9%
NDS	24	0%	NDS	0	0%	NDS	24	0%
NPS	2,991	3%	NPS	1,309	3%	NPS	4,300	3%
USFS	56,876	62%	USFS	30,304	61%	USFS	87,180	62%
OTHER*	2,999	3%	OTHER*	9,101	18%	OTHER*	12,100	9%
Total Requests	**91,512**		**Total Requests**	**49,513**		**Total Requests**	**141,025**	
10-yr Average	9,151		10-yr Average	4,951		10-yr Average	14,103	

- Operations (2)

Units	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND
Operations (2)	10%	30%	5%	5%	10%	5%	35%	-

- Based on estimated workload from Operations

- Contracting (3)

Units	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND
Contracting (3)	6%	8%	1%	4%	10%	3%	68%	-

- Volume of business is based on 10-year average of resource requests processed by the NRCC.
- This is all resource requests In and Out of Northern Rockies.
- These percentages exclude requests placed by agencies not listed above.

- Smoke (4)

Units	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND
Smoke (3)	-	20%	10%	-	-	-	70%	-

- Based on percentages from smoke management breakout from FY06 agreement.

- Safety (5)

Units	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND
Safety (4)	10%	30%	10%	-	-	10%	40%	-

- Based on percentages that came from ground safety breakout from FY2006 agreement. Only 25% of the employee's salary is included.

- NRTC (6)

Units	BIA	BLM	FWS	IDL	DNRC	NPS	USFS	ND
NRTC (5)	8%	7%	1%	4%	7%	2%	71%	-

- Based on NRTC 10-year average student participation

APPENDIX E IDL Survey Report and Data

(See next page.)

Idaho Department of Lands
2016 Wildland Fire Employee Survey
Summary of Findings

ABSTRACT

An online survey of Idaho Department of Lands employees was conducted as part of a larger review of the agencies Wildland Fire Management Program. This report summarizes findings of the survey.

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Contents

Survey Objectives

- Solicit input from a large sampling of the Idaho Department of Lands (IDL) employee population regarding strengths and weaknesses of the IDL fire program
- Solicit suggestions for improvement
- Note: The survey was conducted in conjunction with a more comprehensive review of the Idaho Department of Lands fire management program and this report is supplemental to the findings and conclusions of that larger effort

Survey Methods

- Twenty-eight questions were developed jointly by Wildland Fire Associates and IDL representatives
    - Focused on issues articulated during personal interview process conducted by WFA
    - Mix of categorical and qualitative responses sought
    - Survey was approved by IDL prior to release
    - Survey questions are attached as Appendix A
- SurveyMonkey© was used as the technical platform for collection and initial analysis of responses
- The survey was sent to the IDL employee general mailing list provided by IDL
    - The total number of employees contacted was 528
    - Response was voluntary (self-selecting)
    - The mailing list included non-fire IDL employees
    - Reminders were sent to non-respondents' email addresses on a weekly basis until the close of the survey
    - The overall response rate was 48%
- No questions were required to be answered. Many could be answered with a "No Opinion" or "Not Applicable" choice. Thus, the total number of respondents may vary from one question to another. Some results presented in this report excluded those 'non-responses' when calculating outcomes, and are noted where applicable.
- No identifying information was collected on individual respondents, and responses were not tied to respondent's email address
- The survey opened on August 9, 2016 and remained open for a total of four weeks. It closed on September 7, 2016.

Survey Limitations

- Respondents self-selected from the population of IDL employees included on the email invitation list provided by IDL
    - Responses may not represent total population of IDL
    - Results may be biased by those with a willingness to respond
    - May skew towards those with specific interest in commenting on perceived changes needed, rather than those who are content with the status-quo
- Some questions solicited qualitative responses which are not quantifiable, representing individual perspectives which may not represent the survey population
- Some respondents may have had difficulty in understanding questions or response choices.

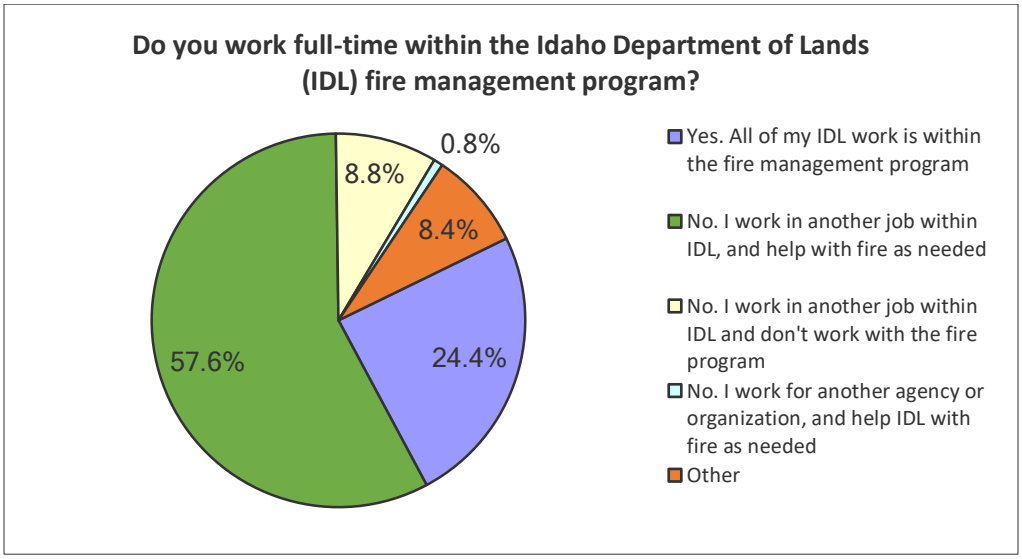
Additional Survey Recommendations

- Further analysis of the data by specific groups or sub-groups may increase understanding of survey results.
- Repeating the survey at regular intervals (e.g., every 3-5 years) would provide IDL with trend data and changes in employee perspectives.

Who Responded to the Survey?

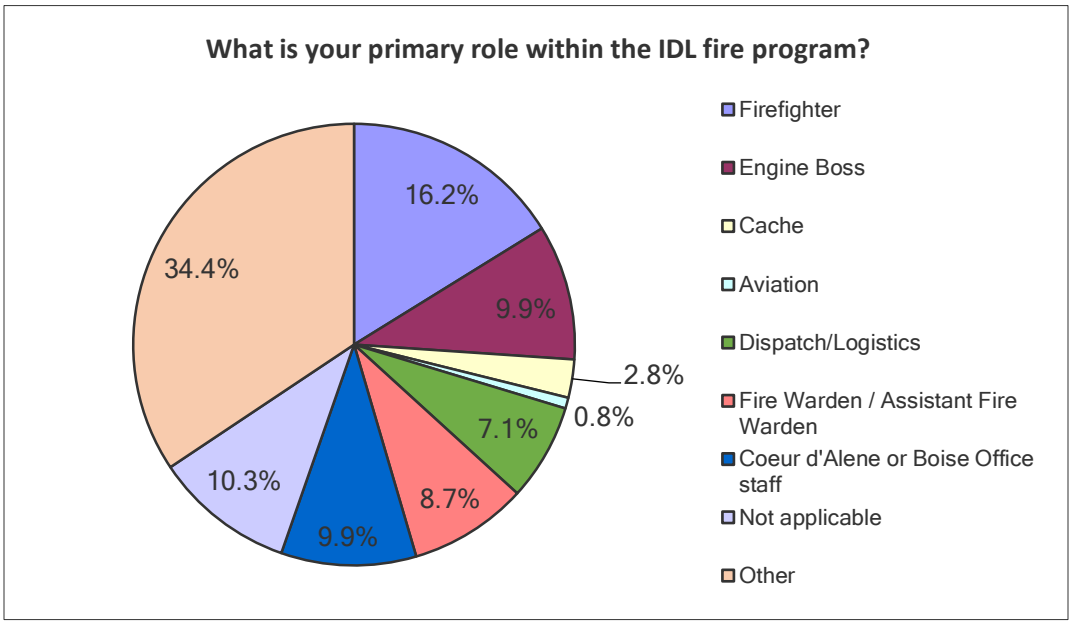
The first set of questions in the survey were intended to gain a general understanding of survey respondents.

- Survey Question 1: Close to two-thirds of respondents work outside of the fire management program and help as needed, with about 25% of respondents indicating they work full-time within the program. This coincides closely with the makeup of the total IDL organization and appears to represent the general makeup of IDL.

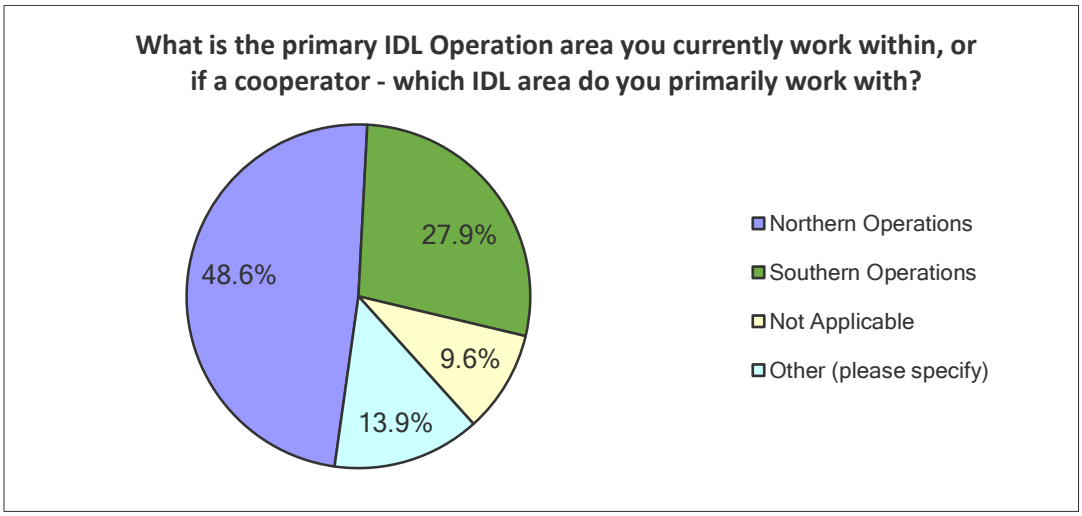


- Survey Question 2: About 37% of respondents have worked in fire management with other agencies or organizations outside of IDL, bringing with them experience, training, and understanding of the larger fire management context. Nearly 50% of respondents claim more than 10 years of experience in wildland fire including both IDL and other agency tenures.

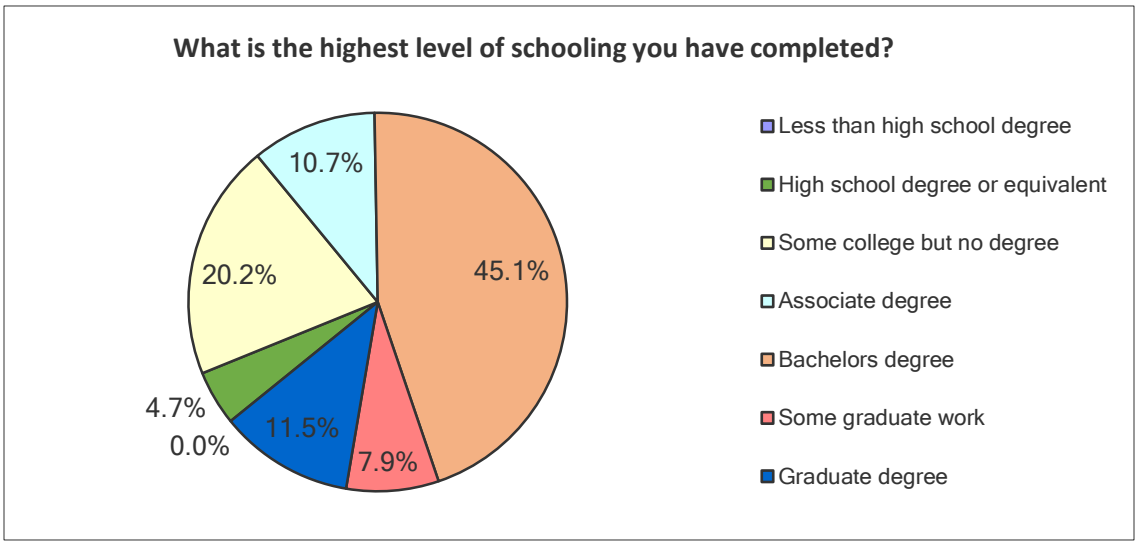
- Survey Question 3: About one-third of respondents indicated 'Other' when asked their role in the IDL fire program. Comments captured information on those respondent's contributions including clerical, managerial, procurement and other support roles. About 26% indicated that they were either firefighter or engine boss.



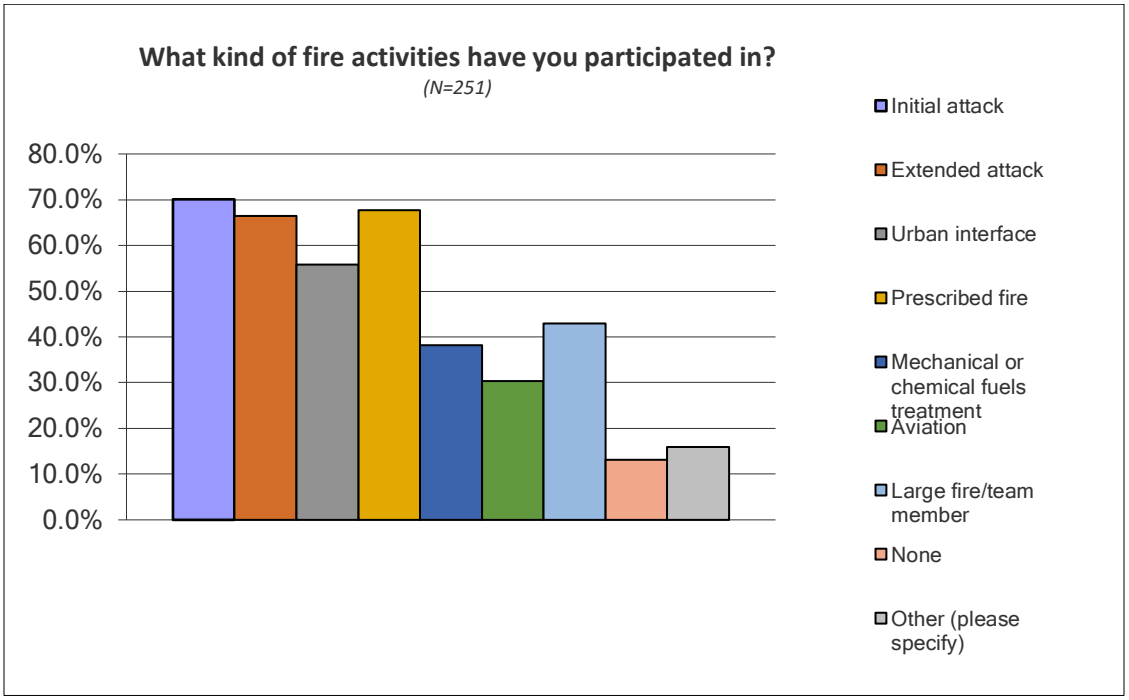
- Survey Question 4: About 49% of survey respondents indicated an association with the Northern Operations area of IDL, with nearly 30% identifying with the Southern Operations area. This appears to be close to the actual distribution of employees associated with the IDL fire program. For the remaining 24% of respondents not associating with a particular operations area, narrative comments describe a variety of associations – most commonly an association with management of the entire state program rather than a particular operations area.



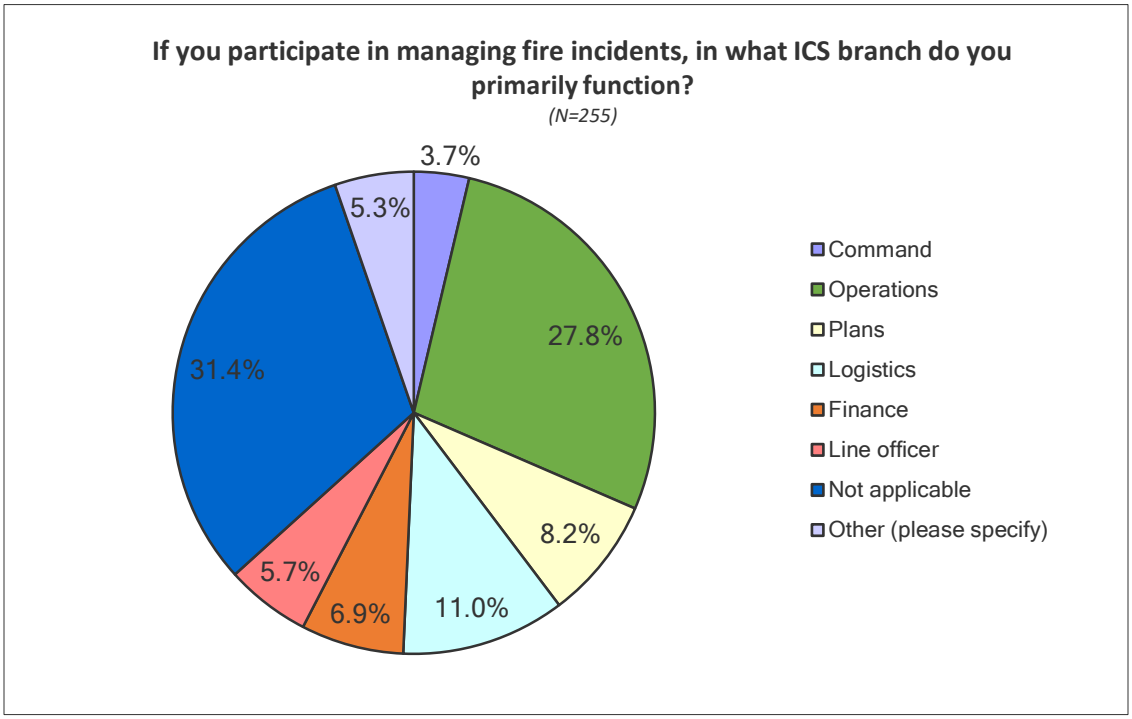
- Survey Question 5: Survey respondents are a well-educated group with 75% claiming an associate's degree or higher.



- Survey Question 6: IDL survey respondents have a wide variety of experience, with over 60% reporting some experience participating in or supporting initial attack, extended attack, and prescribed fire activities.



- Survey Question 7: Thirty-one percent of respondents did not identify with any particular Incident Command System (ICS) branch. For those that did identify with an ICS branch, the majority (28%) indicated work within the Operations branch with most of the remainder identifying association with command and support branches.



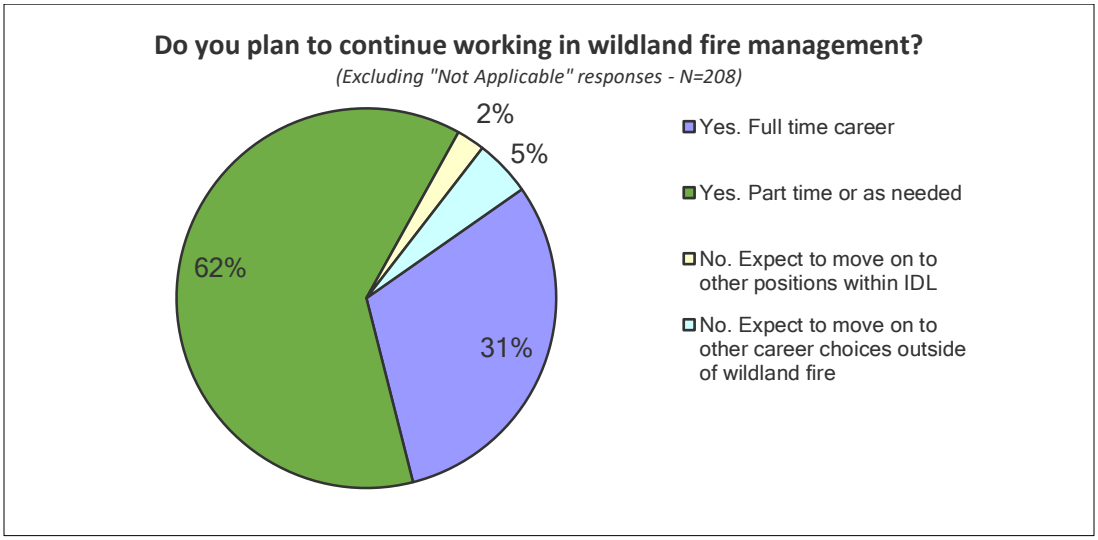
- Survey Question 8: This question asked respondents to list up to three ICS positions they currently hold.

Summary of Findings

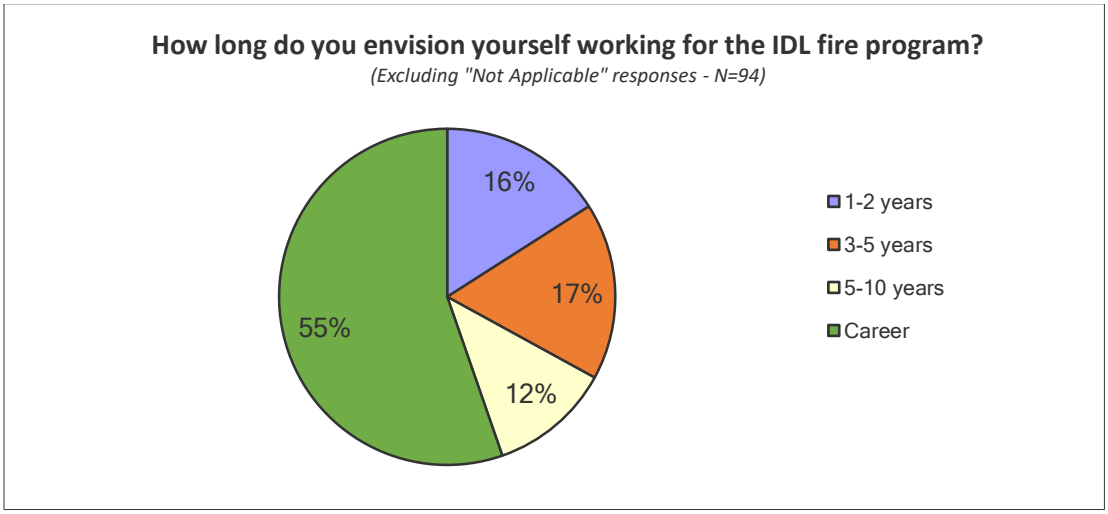
The remaining survey questions were focused on gaining insight into respondent's thoughts on specific aspects of the IDL fire program.

- **Tenure and Training**

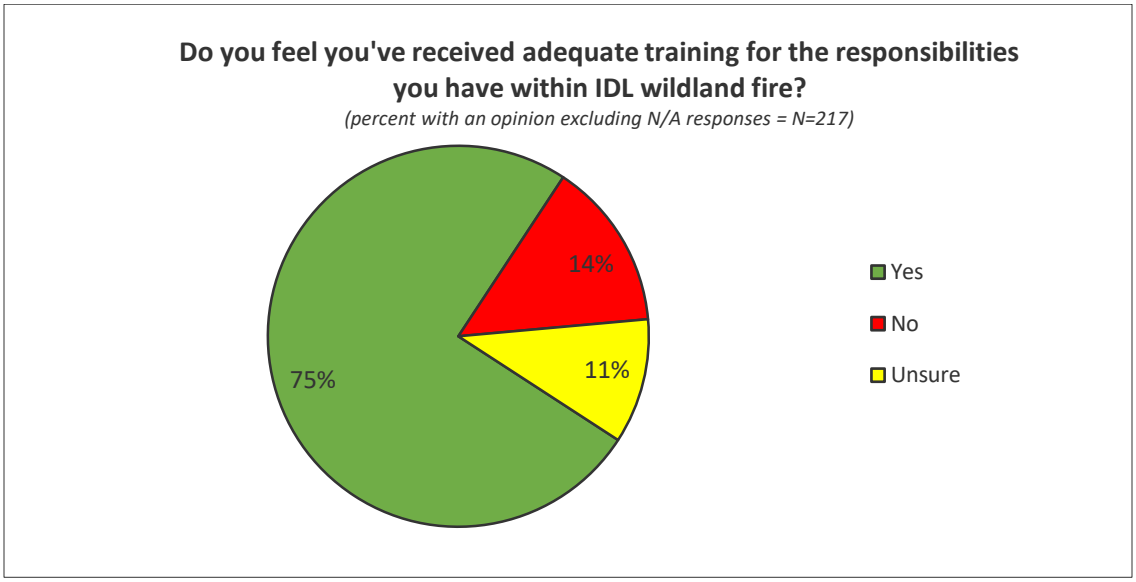
Survey Question 9: For those respondents other than those responding "Not Applicable", 30% indicated that they planned to work in wildland fire as a full-time career choice. An additional 62% indicated they would continue to work with the fire management program part-time or as needed. Only 7% of these respondents planned to discontinue their work with IDL fire.



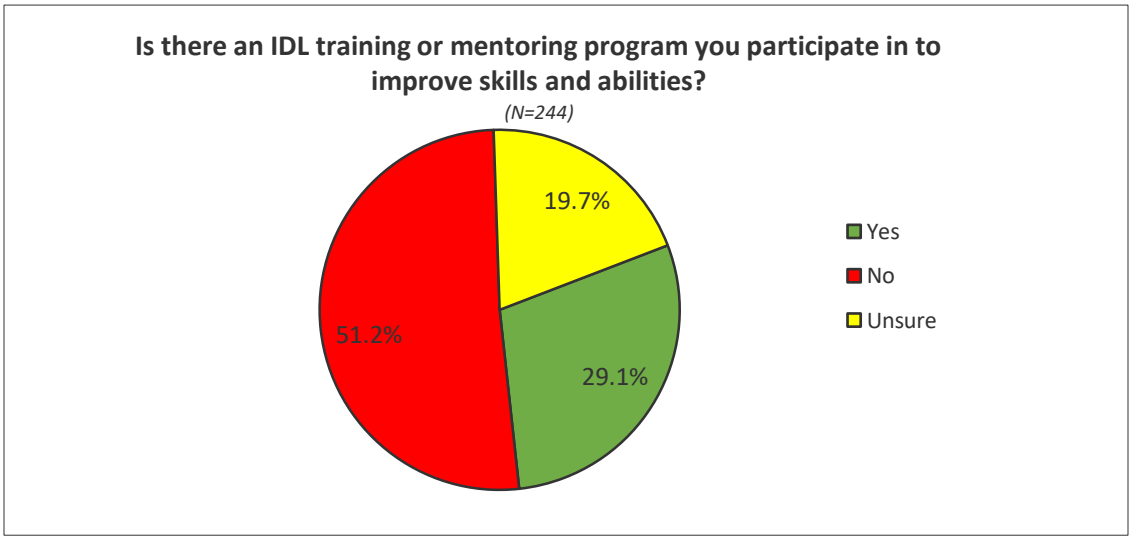
Survey Question 10: For those already working within the IDL fire program, 55% anticipate continuing that work for the remainder of their career. About 30% anticipate a 1-5 year tenure with IDL fire. The remainder indicated a tenure of 3-10 years.



Survey Question 11: For those with an opinion, 75% feel they have received adequate training for their responsibilities. Twenty-five percent are either unsure or feel they need additional training.

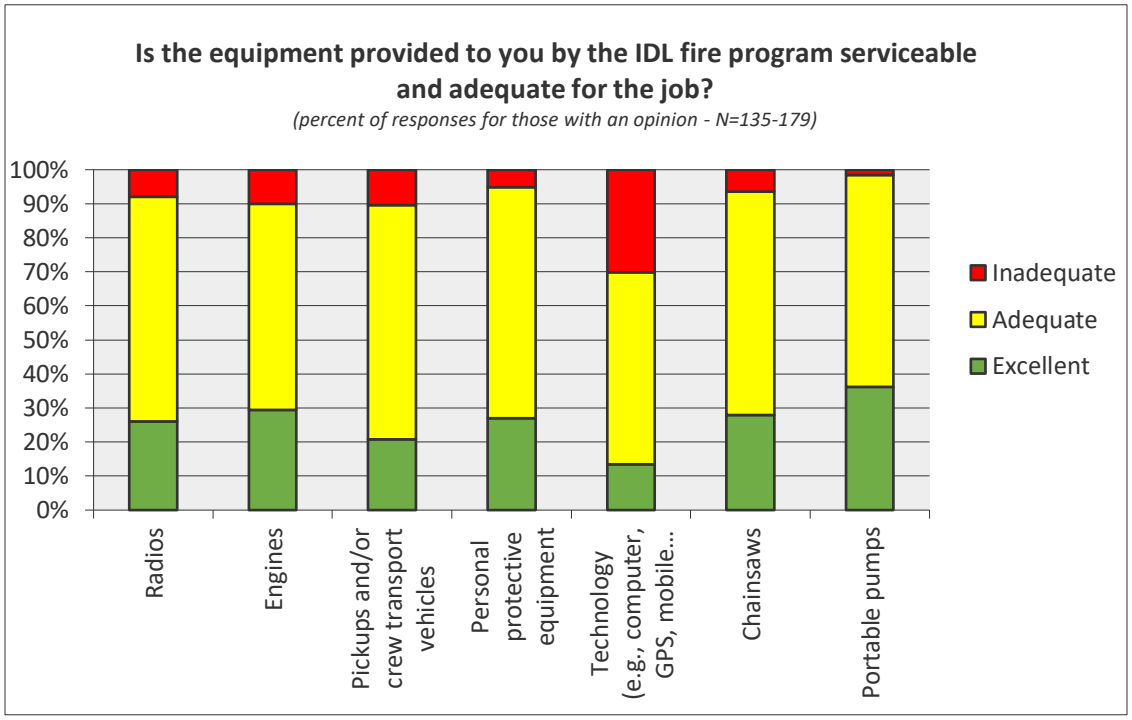


Survey Question 12: Thirty percent of respondents indicated that they participate in a mentoring or training program to help develop skills. Fifty-five percent indicated that they didn't participate in a formal program, and about 30% were unsure.

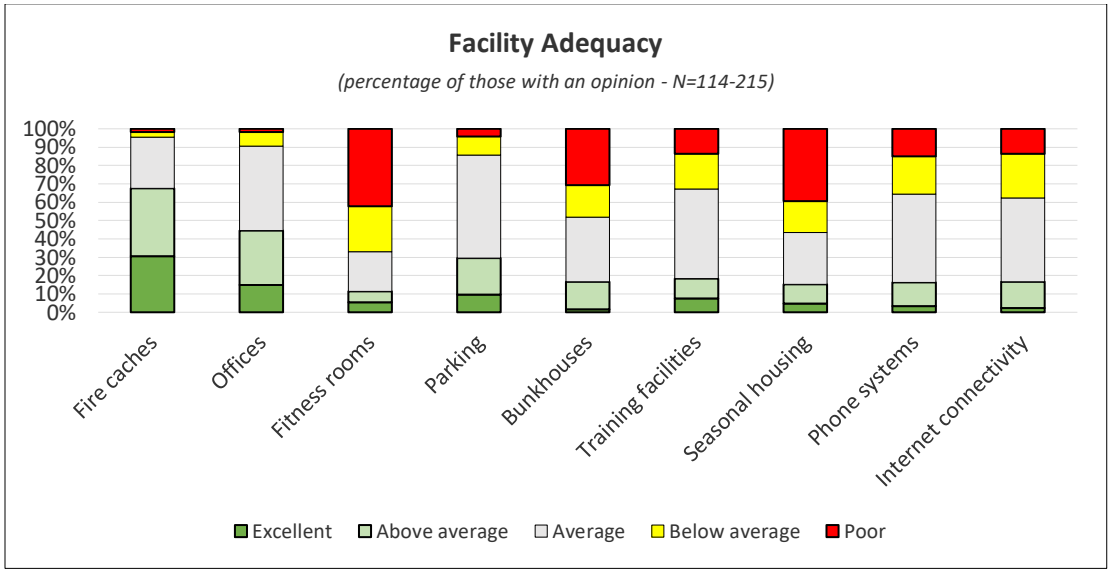


- **Facilities and Equipment**

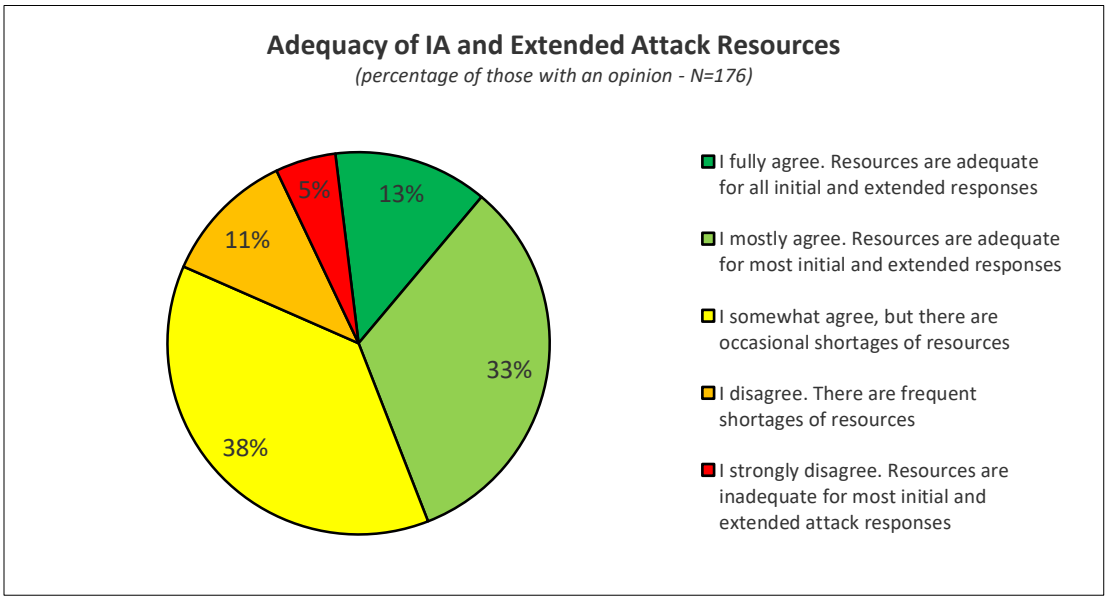
Survey Question 13: Most respondents with an opinion felt that equipment made available to them was excellent or adequate. Lower levels of satisfaction were recorded for technology related equipment with 30% rating that category as "inadequate".



Survey Question 14: For respondents with an opinion, most felt that offices, parking areas and fire caches were excellent to adequate. Other facilities, notably fitness facilities, bunkhouses, seasonal housing and training facilities rated much lower levels of adequacy. Internet connectivity also garnered a lower than average level of adequacy.

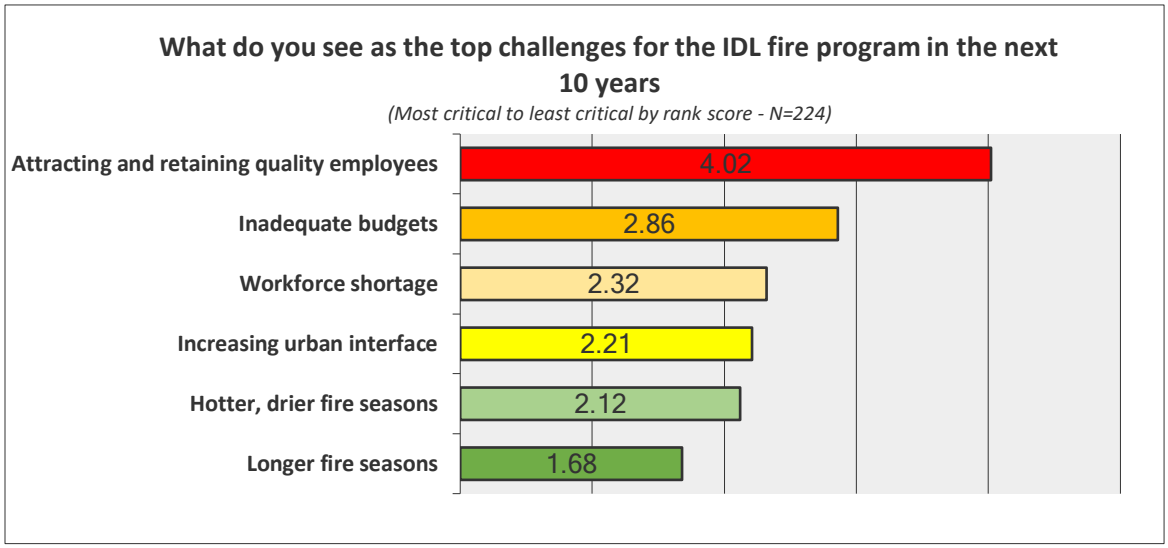


Survey Question 15: Forty-six percent of respondents with an opinion agreed or mostly agreed that initial and extended attack resources were adequate. An additional 38% felt there were occasional shortages, and about 16% felt that initial and extended attack resources were inadequate under many circumstances.



- **Organizational Challenges**

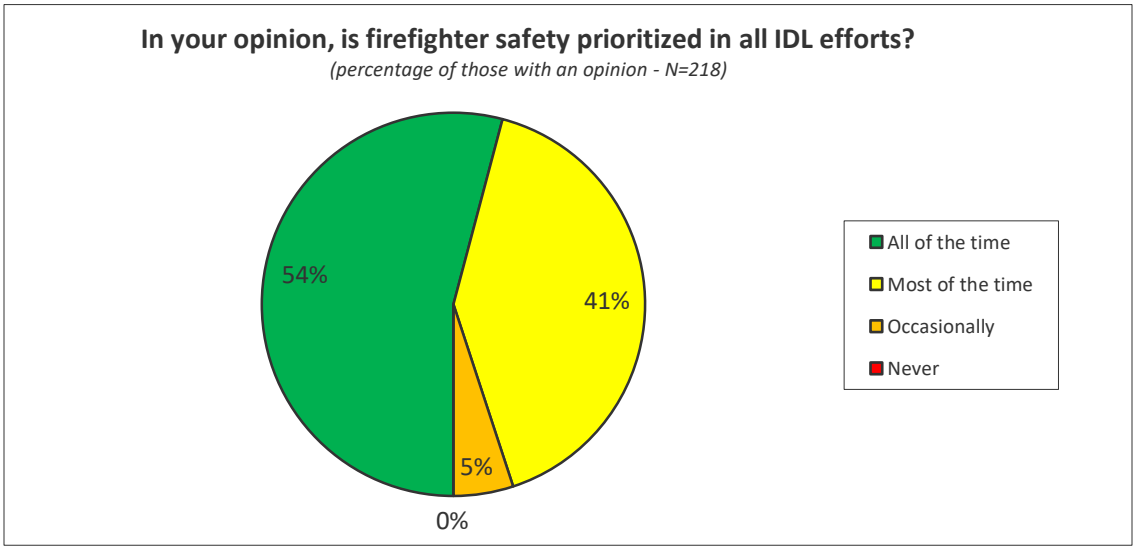
Survey Question 16: When asked to rank a list of potential challenges for IDL fire over the coming 10 years, attracting and retaining quality employees ranked first in importance.



Survey Question 17: Respondents were asked to comment on what they felt were other challenges faced by IDL fire other than those listed in Question 16.

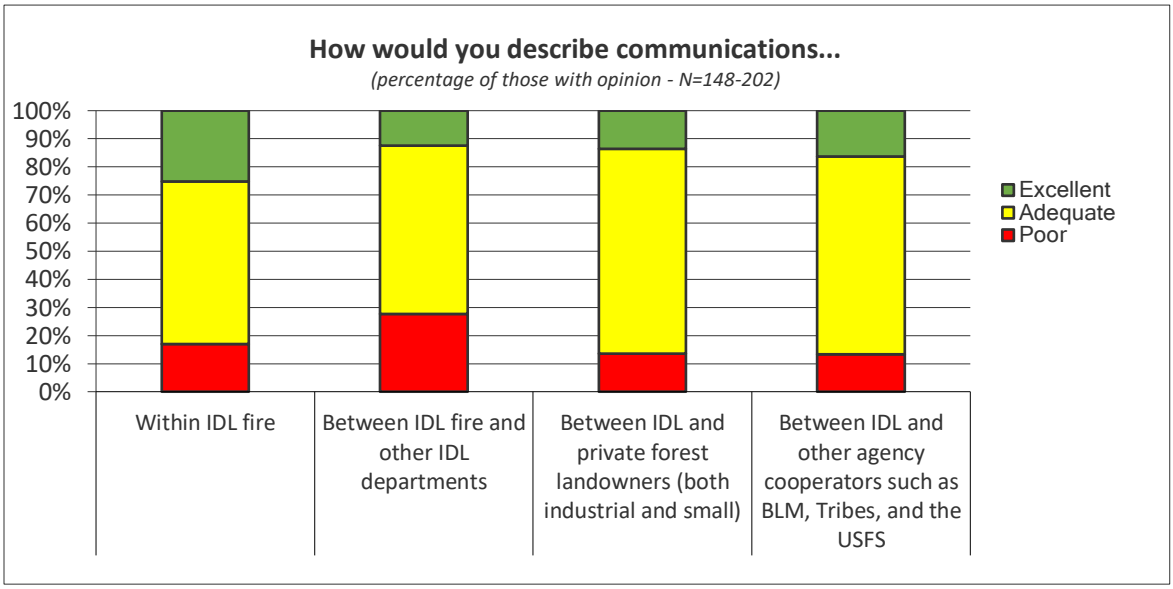
- **Firefighter Safety**

Survey Question 18: Ninety-five percent of respondents indicated that firefighter safety was the priority all or most of the time. Five percent felt it was only occasionally a priority, and none indicated that it was never a priority. Twenty-four respondents provided comments or suggestions.



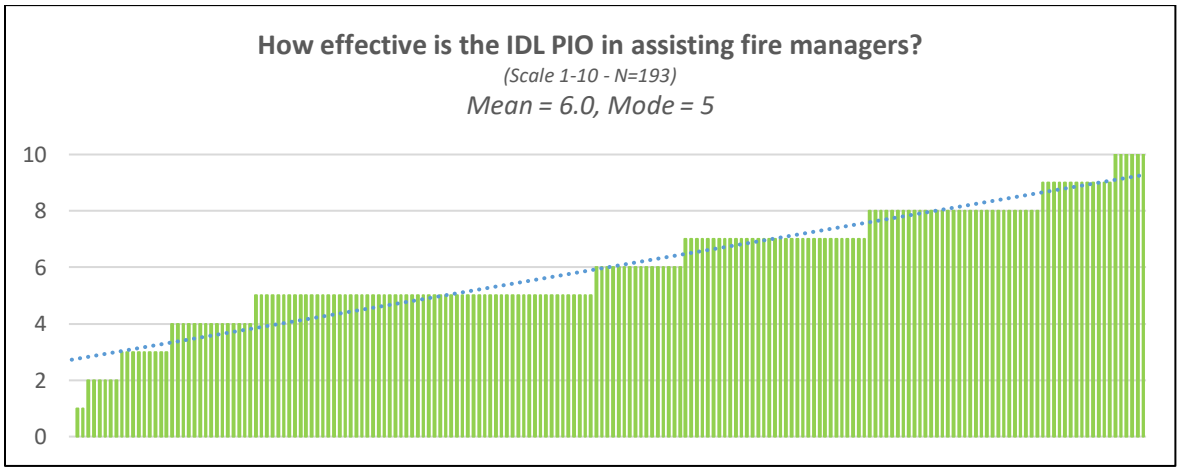
- **Communications**

Survey Question 19: Most respondents felt communications between IDL fire and most other entities was adequate to excellent. There was agreement that communications within IDL fire was adequate to excellent (83% total), with 17% indicating poor internal communications. Communications between IDL fire and other IDL departments scored the lowest among all choices with 28% indicating poor communications and 72% rating them as adequate to excellent.



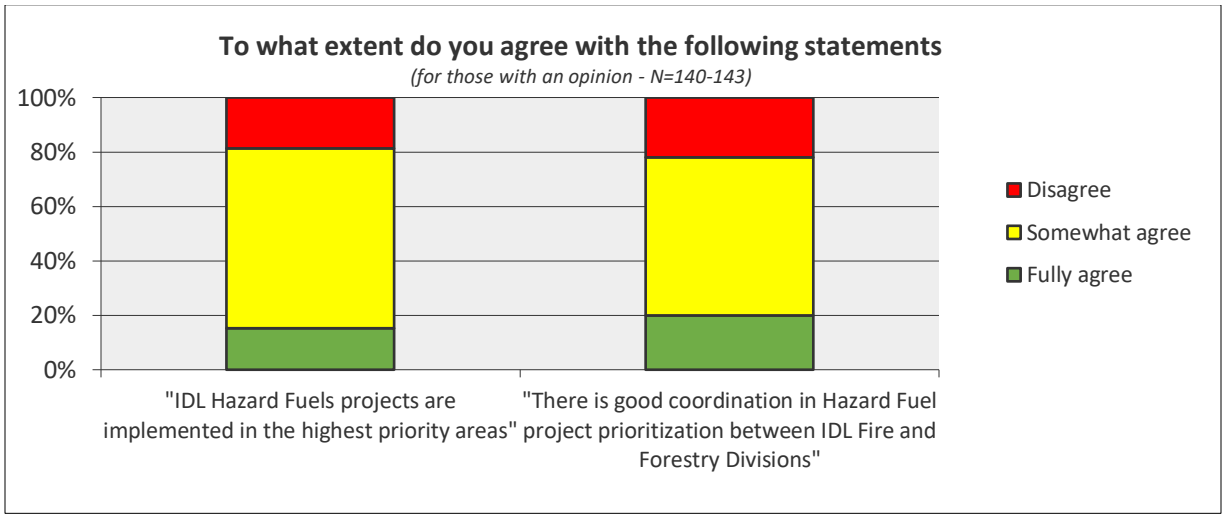
- **Public Information**

Survey Question 20 and 21: On a scale of 1-10 regarding the effectiveness of the Public Information Office in assisting IDL fire managers (with 1 being poor and 10 being excellent), the mean was 6.0, the mode (most often reported response) was 5. Question 21 requested comments and suggestions for the POI function. Of the 61 comments received, most were supportive of the function, while some didn't understand the role of the office, and others indicated a need for more effort in this area.



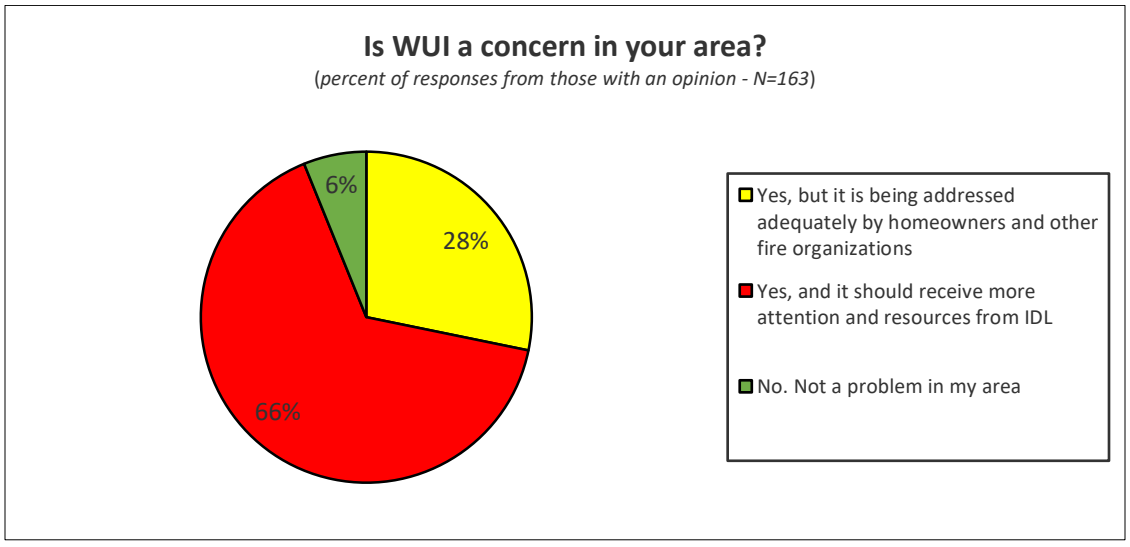
- **Fuels Management**

Survey Question 22: Fewer than 20% of respondents fully agree that IDL fuels management projects are coordinated and implemented effectively, and about 20% disagree with the statements. About two-thirds somewhat agreed.



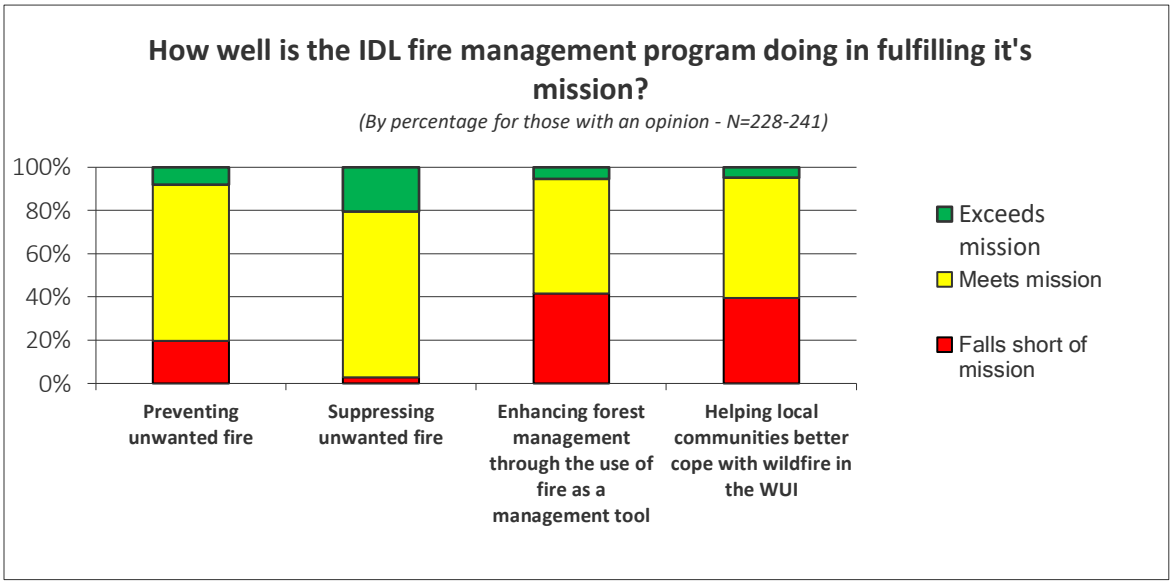
- **Wildland Urban Interface**

Survey Question 23: A large majority (66%) of survey respondents with an opinion say that the wildland urban interface (WUI) is a concern, and that IDL should be doing more in the way of addressing the WUI. Thirty-one respondents offered comments and suggestions.



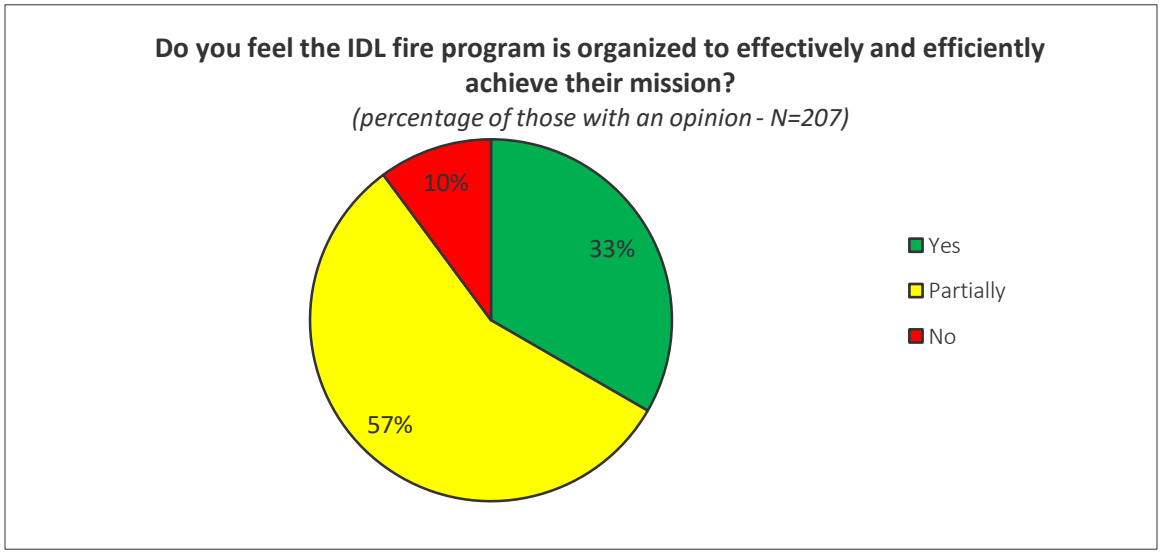
- **IDL Wildland Fire Mission**

Survey Question 24: A high number of survey respondents felt that IDL fire met or exceeded its mission to suppress unwanted fire with only 3% of respondents indicating that IDL was failing in that aspect. Twenty percent felt IDL was falling short on its prevention mission, and 40% indicated that IDL was falling short in the areas of using fire as a forest management tool and in helping local communities cope with fire in the WUI. Thirty-one respondents provided comments or suggestions for improvement.



- **Organizational Efficiency**

Survey Question 25: One third of respondents felt IDL fire was organized effectively to achieve the organization's mission. A majority (57%) felt that the organization of IDL fire was at least partially effective, and 10% indicated that it was not well organized. Forty-six respondents provided comments or suggestions for improvement.



- **IDL Strengths**

Survey Question 26: Respondents were asked to describe IDL's greatest strength. One hundred and sixty-one comments were received in response to this question.

- **IDL Challenges**

Survey Question 27: Respondents were asked to describe their greatest challenge in working with IDL. One hundred and fifty-six responses were recorded.

- **Other Comments**

Survey Question 28: Respondents were asked to provide any other comments they would like to include. Eighty-two comments were received in response to this question.

Appendix A – Survey Questions

- Link to Adobe© PDF version of survey questions

SurveyMonkey_821
43471.pdf

Idaho Department of Lands
2016 Wildland Fire Program Review

1. Do you work full-time within the Idaho Department of Lands (IDL) fire management program?

- ◯ Yes. All of my IDL work is within the fire management program
- ◯ No. I work in another job within IDL, and help with fire as needed
- ◯ No. I work in another job within IDL and don't work with the fire program
- ◯ No. I work for another agency or organization, and help IDL with fire as needed
- ◯ Other (please specify)

2. How many years have you worked in wildland fire management?

	For IDL	For other agencies or cooperators
Less than 1 year	☐	☐
1-5 years	☐	☐
6-10 years	☐	☐
More than 10 years	☐	☐
Not applicable	☐	☐

3. What is your primary role within the IDL fire program?

- ◯ Firefighter
- ◯ Engine Boss
- ◯ Cache
- ◯ Aviation
- ◯ Dispatch/Logistics
- ◯ Fire Warden or Assistant Fire Warden
- ◯ Coeur d'Alene or Boise Office staff
- ◯ Not applicable
- ◯ Other (please specify)

1

4. What is the primary IDL Operation area you currently work within, or if a cooperator - which IDL area do you primarily work with?

- ◯ **Northern Operations** *(Includes: Priest Lake Supervisory Area, Pend Oreille Lake Supervisory Area, Kootenai Valley Forest Protective District, Mica Supervisory Area, Cataldo Forest Protective District, St. Joe Supervisory Area, Ponderosa Supervisory Area)*
- ◯ **Southern Operations** *(Includes: Clearwater Supervisory Area, Maggie Creek Supervisory Area, Craig Mountain Forest Protective District, Payette Lakes Supervisory Area, Southwest Supervisory Area, Eastern Supervisory Area, Jerome Field Office)*
- ◯ Not Applicable
- ◯ Other (please specify)

5. What is the highest level of schooling you have completed?

- ◯ Less than high school degree
- ◯ High school degree or equivalent (e.g., GED)
- ◯ Some college but no degree
- ◯ Associate degree
- ◯ Bachelors degree
- ◯ Some graduate work
- ◯ Graduate degree

6. What kind of fire activities have you participated in?

(Check all that apply)

- ☐ Initial attack
- ☐ Extended attack
- ☐ Urban interface
- ☐ Prescribed fire
- ☐ Mechanical or chemical fuels treatment
- ☐ Aviation
- ☐ Large fire/team member
- ☐ None
- ☐ Other (please specify)

7. If you participate in managing fire incidents, in what ICS branch do you primarily function?

- ◯ Command
- ◯ Operations
- ◯ Plans
- ◯ Logistics
- ◯ Finance
- ◯ Line officer
- ◯ Not applicable
- ◯ Other (please specify)

8. What are your three highest current wildland fire ICS qualifications?

Qualification #1

Qualification #2

Qualification #3

9. Do you plan to continue working in wildland fire management?

- ◯ Yes. Full time career
- ◯ Yes. Part time or as needed
- ◯ No. Expect to move on to other positions within IDL
- ◯ No. Expect to move on to other career choices outside of wildland fire
- ◯ Not appicable

Other or Comment

10. If you are currently an IDL fire program employee, how long do you envision yourself working for the program?

- ◯ 1-2 years
- ◯ 3-5 years
- ◯ 5-10 years
- ◯ Career
- ◯ Not applicable

Comment

11. Do you feel you've received adequate training for the responsibilities you have within IDL wildland fire?

- ◯ Yes
- ◯ No
- ◯ Unsure
- ◯ Not applicable

Explain

12. Is there an IDL training or mentoring program you participate in to improve skills and abilities?

- ◯ Yes
- ◯ No
- ◯ Unsure

Explain how this could be improved

13. Is the equipment provided to you by the IDL fire program serviceable and adequate for the job?

	Excellent	Adequate	Inadequate	No Opinion
Radios	◯	◯	◯	◯
Engines	◯	◯	◯	◯
Pickups and/or crew transport vehicles	◯	◯	◯	◯
Personal protective equipment	◯	◯	◯	◯
Technology (e.g., computer, GPS, mobile phone)	◯	◯	◯	◯
Chainsaws	◯	◯	◯	◯
Portable pumps	◯	◯	◯	◯

Comments

14. Are various IDL facilities generally safe and adequate for their purposes?

	Excellent	Above average	Average	Below average	Poor	No opinion
Fire caches	◯	◯	◯	◯	◯	◯
Offices	◯	◯	◯	◯	◯	◯
Fitness rooms	◯	◯	◯	◯	◯	◯
Parking	◯	◯	◯	◯	◯	◯
Bunkhouses	◯	◯	◯	◯	◯	◯
Training facilities	◯	◯	◯	◯	◯	◯
Seasonal housing	◯	◯	◯	◯	◯	◯
Phone systems	◯	◯	◯	◯	◯	◯
Internet connectivity	◯	◯	◯	◯	◯	◯

Comments

15. Please select your reaction to the following statement:

"IDL fire has adequate initial and extended attack resources in the district I work in (engines, crews, dozers, etc.)."

- ◯ I fully agree. Resources are adequate for all initial and extended responses
- ◯ I mostly agree. Resources are adequate for most initial and extended responses
- ◯ I somewhat agree, but there are occasional shortages of resources
- ◯ I disagree. There are frequent shortages of resources
- ◯ I strongly disagree. Resources are inadequate for most initial and extended attack responses
- ◯ No opinion

Comments

16. What do you see as the top challenges for the IDL fire program in the next 10 years?

(Rank in order from 1 - most critical, to 6 - least critical)

- Inadequate budgets
- Attracting and retaining quality employees
- Increasing urban interface
- Hotter, drier fire seasons
- Longer fire seasons
- Workforce shortage

17. Are there other challenges not listed above?

6

18. In your opinion, is firefighter safety prioritized in all IDL efforts?

- ○ All of the time
- ○ Most of the time
- ○ Occasionally
- ○ Never
- ○ No opinion

Comments

19. How would you describe communications...

	Excellent	Adequate	Poor	No opinion
Within IDL fire	○	○	○	○
Between IDL fire and other IDL departments	○	○	○	○
Between IDL and private forest landowners (both industrial and small)	○	○	○	○
Between IDL and other agency cooperators such as BLM, Tribes, and the USFS	○	○	○	○

Comments

20. On a scale of 1-10, how effective is the IDL Public Information Office (PIO) in assisting fire managers?

Poor Adequate Excellent

21. Suggestions for improvement in the PIO function

7

22. To what extent do you agree with the following statements:

	Fully agree	Somewhat agree	Disagree	No opinion
"IDL Hazard Fuels projects are implemented in the highest priority areas"	○	○	○	○
"There is good coordination in Hazard Fuel project prioritization between IDL Fire and Forestry Divisions"	○	○	○	○

Comments

23. Is the wildland urban interface (WUI) a concern for the IDL fire program in your area?

Yes, but it is being addressed adequately by homeowners and other fire organizations	Yes, and it should receive more attention and resources from IDL	No. Not a problem in my area	No opinion
○	○	○	○

Comments

24. How well is the IDL fire management program doing in fulfilling it's mission:

"To conserve and protect six million acres of private, state and federal forestlands by preventing and/or suppressing all unwanted fire; to enhance forest management on state endowment lands by utilizing fire as a management tool; and to help local communities better cope with wildfire in the wildland urban interface."

	Exceeds mission	Meets mission	Falls short of mission	No opinion
Preventing unwanted fire	○	○	○	○
Suppressing unwanted fire	○	○	○	○
Enhancing forest management through the use of fire as a management tool	○	○	○	○
Helping local communities better cope with wildfire in the WUI	○	○	○	○

Comments

25. Do you feel the IDL fire program is organized to effectively and efficiently achieve their mission?

- ◯ Yes
- ◯ Partially
- ◯ No
- ◯ No opinion

Comments

26. What are the IDL fire program's greatest strengths?

27. What challenges have you faced working in the IDL fire program?

28. Do you have any other comments, questions or concerns?