Part I – Agency Profile

Agency Overview

Research mission – investigation into forestry and rangeland resource management problems, forest nursery production, and related areas. Part of the College of Natural Resources, Forest Utilization Research also includes the Rangeland Center with a legislative mandate for interdisciplinary research, education and outreach as suggested by a partner advisory council to fulfill the University's land-grant mission (Idaho Code § 38-715), and the Policy Analysis Group with a legislative mandate to provide objective data and analysis pertinent to natural resource and land-use issues as suggested by an advisory committee of Idaho's natural resource leaders (Idaho Code § 38-714).

Core Functions/Idaho Code

The duty of the Experiment Station of the University of Idaho's College of Natural Resources is to institute and conduct investigations and research into the forestry, wildlife and range problems of the lands within the state. Such problems specifically include forest and timber growing, timber products marketing, seed and nursery stock production, game and other wildlife, and forage and rangeland resources. Information resulting from cooperative investigation and research, including continuing inquiry into public policy issues pertinent to resource and land use questions of general interest to the people of Idaho, is to be published and distributed to affected industries and interests. (Idaho Code § 38-701, 38-703, 38-706, 38-707, 38-708, 38-709, 38-710, 38-711, 38-714, 38-715)

Revenue and Expenditures

Revenue	FY 2017	FY 2018	FY 2019	FY 2020
General Fund	$1,268,400	$1,347,100	$1,281,100	$1,435,500
Total	**$1,268,400**	**$1,347,100**	**$1,281,100**	**$1,435,500**
Expenditures	**FY 2017**	**FY 2018**	**FY 2019**	
Personnel Costs	$1,106,100	$1,106,900	$1,121,800	$1,244,200
Operating Expenditures	$136,900	$159,300	$159,300	$191,300
Capital Outlay	$25,400	$80,900	$0	$0
Trustee/Benefit Payments	$0	$0	$0	$0
FY201% Rescission/1% COVID/HB557	N/A	N/A	N/A	$31,200
Total	**$1,268,400**	**$1,347,100**	**$1,281,100**	**$1,435,500**

Profile of Cases Managed and/or Key Services Provided

Cases Managed and/or Key Services Provided	FY 2017	FY 2018	FY 2019	FY 2020
Number of Private Landowners Assisted:				
Pitkin Forest Nursery	1575	1570	2082	2093
Number of Seedling Industry Research Projects:				
Pitkin Forest Nursery	6	5	7	6
Number of:				
• Research Projects:				
Experimental Forest	15	16	15	14
Policy Analysis Group	10	12	12	13
Pitkin Forest Nursery	11	10	12	11
Rangeland Center	21	25	27	21
Mica Creek	N/A	N/A	N/A	5
• Teaching Projects:				
Experimental Forest	26	22	25	14
Policy Analysis Group	8	8	8	6
Pitkin Forest Nursery	3	6	4	5
Rangeland Center	11	12	14	15
Mica Creek	N/A	N/A	N/A	3
• Service Projects:				
Experimental Forest	12	12	12	13

Cases Managed and/or Key Services Provided	FY 2017	FY 2018	FY 2019	FY 2020
Policy Analysis Group	10	11	11	4
Pitkin Forest Nursery	10	10	10	9
Rangeland Center	17	16	17	12
Mica Creek	N/A	N/A	N/A	1

Red Tape Reduction Act

Each agency shall incorporate into its strategic plan a summary of how it will implement the Red Tape Reduction Act, including any associated goals, objectives, tasks, or performance targets. This information may be included as an addendum.

	As of July 1, 2019
Number of Chapters	*N/A*
Number of Words	*N/A*
Number of Restrictions	*N/A*

FY 2020 Performance Highlights *(Optional)*

Policy Analysis Group (PAG)

FY21 will prove to be a pivotal year for the Policy Analysis Group. Phil Cook retired after 25 years of research centered on Idaho's natural resource policies. Raju Pokharel, who served as a PAG postdoctoral scholar for the last four years, is heading to a faculty position at Michigan State University. These departures leave PAG in a place of transition and an opportunity to reevaluate strengths and future direction. Despite looming changes, in FY20, the PAG continued to build on relationships from past years. For instance, PAG speakers have become commonplace at regional workshops and symposia. Examples include presence at the Forester's Forum held annually in Coeur D'Alene, which provides access to current research and technology to well over 200 regional foresters. Another example is PAG serving as the focal presentation at the Forestry Day at the Legislature luncheon aimed at providing an introduction to the importance of forests and natural resources to Idaho's incoming legislators and staff. While COVID-19 put an end to a potentially busy spring travel, we were still able to present research to over 300 area loggers through our ongoing collaboration with the Logger Education to Advance Professionalism (LEAP) program. In total, PAG researchers provided over 20 structured presentations to a wide array of stakeholders reaching well over 1,500 attendees. These presentations are a function of our strong research program, including completing two new Idaho Experiment Station Bulletins, a Report and an Issue Brief, in addition to 11 peer reviewed journal articles. Through all this outreach, the PAG did not lose focus on the importance of documenting its work in reports and bulletins as well as the peer reviewed literature. The broad extent of our research focus and audience demonstrates our commitment to our legislative mandate to provide timely information to inform critical land management decisions at multiple levels of government.

Pitkin Forest Nursery (Nursery)

In FY20, the Pitkin Nursery continued to serve the citizens of Idaho through our mission of research, outreach, education focused on reforestation and native plant restoration, as well as providing seedlings to meet the needs of landowners in the state. The Nursery employed 30 university students to grow the seedlings and provide hands-on greenhouse management training. The Nursery sold 351,406 seedlings in FY20, of which 51,130 seedlings were grown for the reforestation needs of the University of Idaho Experimental Forest. Information on seedlings and planting techniques were provided to approximately 2,300 unique stakeholders during the year, plus engagement with the public through nursery tours for over 200 individuals. The Nursery continued to serve as an educational facility for university students, where 213 undergraduate students toured the greenhouse facility in person and virtually to learn about seedling propagation techniques and the importance of seedlings for forestry in Idaho. The Nursery pursued 10 new and continuing research projects supported by external funding agencies and internal funds generated from seedling sales and seedling quality testing. Six of the 10 research projects were seedling industry research projects. New external funding in FY20 was $891,325 that was used to support the research training of postdoctoral scientists, graduate students, and undergraduate students. Example new research projects started in FY20 include a study to better understand the effects of root-feeding insects on greenhouse plants and insect control strategies funded through the USDA National Institute of Food and Agriculture, and a project exploring management techniques for controlling foliar pathogens on greenhouse plants

supported by the Idaho State Department of Agriculture. Ongoing and completed projects resulted in 5 publications in FY20, all focused on enhancing seedling propagation, understanding seedling quality, and improving reforestation success across the region.

University of Idaho Experimental Forest (UIEF)
In FY20, the University of Idaho Experimental Forest worked with internal and external partners to initiate 14 new research projects, 25 teaching projects, and 13 service and demonstration projects with tours for Idaho Dept. of Lands, US Forest Service, Idaho Master Forest Stewards, the Idaho Logger Education to Advance Professionalism (LEAP), and other key stakeholders. A highlight of new research is advancing smart forestry technology focused on precision logging, planting and thinning operations using remote sensing, drones, high accuracy equipment location and guidance techniques, and other advanced tools to increase production and utilization of forest products in ways that benefit loggers, mills and landowners. To support this initiative, we participated in a new LiDAR remote sensing acquisition on all UIEF lands coordinated with Idaho Dept. of Lands, Stimson Lumber, PotlatchDeltic, Bennett Lumber, US Forest Service, and other landowners, which allows the results of several new advanced forestry methods and models developed by CNR researchers on the UIEF to have direct application improving forest land management on core state, industry and federal forestland in Idaho. We worked with Northwest Management Inc. to develop a new, digital inventory model of all individual trees on the 8,300-acre core UIEF lands in Latah County to support cutting-edge forestry research, demonstration, and training the future forestry workforce. In FY20, the UIEF constructed a new 4000 square foot shop and headquarters in Princeton to support mechanizing the Student Logging Crew, now in its 48th year, and coordinate activities serving the Land Grant Mission on the main University research forests managed by CNR. Transitioning to management from Moscow to this strategically optimal location in close proximity to the primary research land base has increased efficiency in timber and fire management to better utilize, protect and support use of University forest research and teaching lands. We worked with industry and agency stakeholders to develop and implement a new model for active forestry student leadership in all aspect of productive UIEF forest management from planning to inventory, silviculture, harvesting and contract administration. A focus of UIEF student staff work has been planning and implementing FY20 and FY21 management operations that both address forest health needs on the UIEF through active management and contribute to the ICCU Arena project financially and with provision of raw forest product materials in collaboration with Idaho Forest Group and numerous others forest products companies. The ICCU Arena is the first mass timber sports arena in the nation currently being constructed on the Moscow campus to promote the use of Idaho forest products and advanced wood building techniques.

Rangeland Center (Center)
In FY 20, the Center proved it can be a catalyst for interdisciplinary research into emerging issues on Idaho's rangelands. The Center is part of 6 different research projects that brought in over $2 million dollars of external funding. Part of this funding is a USDA-AFRI funded project to research the social, economic, and ecologic implications of riparian management practices that will provide funding for graduate and under-graduate students and bridges disciplines across two colleges and five departments. Another example of our leadership is a unique collaborative project with the USDA Forest Service Caribou National Forest to investigate the effects of dormant season grazing on cheatgrass. The Center remains engaged with industry and agency groups throughout the state, providing trusted science to inform management through events like the Idaho Range Conservation Partnership, the Idaho Livestock Symposium, and the Rangeland Fall Forum that together reached over 450 people. The Center continues to support research, education, and outreach at the University's Rinker Rock Creek Ranch, a unique location focused on showing how ranching and conservation can be mutually beneficial, by bringing in external funding and expanding opportunities to educate students. Center members published 13 referred articles and conducted numerous presentations to share our knowledge to a wide array of stakeholders locally and nationally. Education of the next generation of range managers continues to be an important goal for the Center, and we supported 5 student interns through the year.

Mica Creek Experimental Watershed (MCEW)
The Mica Creek Experimental Watershed study was added to the FUR program in FY2020. The MCEW is a paired and nested watershed study in Shoshone County in northern Idaho and is privately held by the PotlatchDeltic Corporation. This long-term watershed study (1990-present) is designed to assess the effects of Idaho forest Best Management Practices on water quantity, quality, streamflow regime, aquatic macroinvertebrates, and fish populations. In 2020, the MCEW program hired a full-time Forested Watershed Scientist in May 2020 to lead and

manage the ongoing data collection and curation activities and purchased new and upgraded equipment for stream gauging and hydrometeorological monitoring stations. Collaborative work includes serving as a field site for a Pacific Northwest National Laboratory multi-watershed study designed to predict how hydrological disturbances influence biogeochemical activity in space and time. The MCEW is also continuing to serve as a long-term research site for a stream metabolism study by the National Council for Air and Stream Improvement (NCASI). The goal of these studies is to provide predictive information that is transferrable across multiple watersheds from the regional to national scale. Project personnel also facilitated the publication of two peer-reviewed papers, one on methods to simulate water and sediment yield in working forest watersheds (Srivastava et al., 2020) and one on a regional synthesis of the effects of forest management on seasonal low flows (Coble et al., 2020) which has recent emerged as a critical topic for fish populations in the Pacific Northwest. The project also contributed to the production of a technical report on the efficacy of Idaho's Class I stream shade rule (Link et al., 2020).

Part II – Performance Measures

Performance Measure		FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Goal 1 *Achieve excellence in scholarship and creative activity through an institutional culture that values and promotes strong academic areas and interdisciplinary collaboration among them.*						
1. Objective A, Measure I: Number of CNR faculty, staff, students and constituency groups involved in FUR-related scholarship or capacity building activities.	actual	46	50	64	54	----------
	target	*46*	*49*	*51*	*52*	*52*
2. Objective A, Measure II: Number and diversity of courses that use full or partially FUR funded projects, facilities or equipment to educate, undergraduate, graduate and professional students.	actual	23	28	43	41	----------
	target	*23*	*24*	*25*	*26*	*26*
3. Objective B, Measure I: An accounting of products (e.g., research reports, economic analysis, BMPs) and services (e.g., protocols for new species shared with stakeholders, policy education programs and materials provided, accessible data bases or market models).	actual	31	36	37	35	----------
	target	*31*	*32*	*33*	*34*	*34*
4. Objective B, Measure II: An accounting of projects recognized and given credibility by external reviewers through licensing, patenting, publishing in refereed journals, etc.	actual	13	16	24	40	----------
	target	*13 refereed articles*	*14 refereed articles*	*15 refereed articles*	*16 refereed articles*	*16*
Goal 2 *Engage with the public, private and non-profit sectors through mutually beneficial partnerships that enhance teaching, learning, discovery, and creativity.*						
5. Objective A, Measure I: Document cases: Communities served and resulting documentable impact; governmental agencies served and resulting documentable impact; non-governmental agencies and resulting documentable impact; private businesses and resulting documentable impact; and private landowners and resulting documentable impact. Meeting target numbers for audiences identified below and identifying mechanisms to measure economic and social impacts	actual	1,250	1,835	2.839	2,842	----------
	target	*1,250*	*1,250*	*1,750*	*1,850*	*1,850*

Performance Measure		FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Goal 3 *Efficient financial management of FUR state appropriated dollars supporting Goals 1 and 2 and leveraging resources to secure external funding.*						
6. Objective A, Measure I: New funding sources from external granting agencies, private and public partnerships and other funding groups.	actual	13	17	14	22	----------
	target	*13*	*14*	*15*	*16*	*16*

Performance Measure Explanatory Notes *(Optional)*

Performance Measure #1 – Seeking 20% growth by FY2023 based on increased staff resources in 2016 that allows more faculty, staff, students and constituency groups to be involved in FUR-related scholarship activities.

Performance Measure #2 – Seeking 15% growth by FY2023 based on College and program goals to enhance coordination of course offerings and research.

Performance Measure #3 – Seeking 15% growth by FY2023 based on a critical need to communicate with external stakeholders, and increase the pace of products produced.

Performance Measure #4 – Seeking 25% growth by FY2023 based on increased staff resources in 2016 focused on research that will increase scientific outreach and communication.

Performance Measure #5 – This is a new measure based on UI and College strategic goal to increase involvement and communication with external stakeholders. The target of 1,250 participants served was established from internal analysis of recent year participants.

Performance Measure #6 – Seeking 25% growth based on analysis of projects started and completed in recent years, staff capacity, and the need to increase the pace of projects completed annually.

For More Information Contact

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