



United States  
Department of  
Agriculture

Forest  
Service

Pacific  
Southwest  
Region

March 2013



# **BUSINESS PLAN: Pack Stock Center of EXCELLENCE**

## **Region 5 Pack Stock Program**

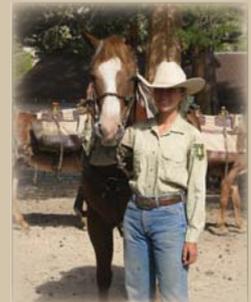


In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness. For this purpose there is hereby established a National Wilderness Preservation System to be composed of federally owned areas designated by the Congress as "wilderness areas," and these shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness; and no Federal lands shall be designated as "wilderness areas" except as provided for in this Act or by a subsequent Act. The inclusion of an area in the National Wilderness Preservation System notwithstanding, the area shall continue to be managed by the Department and National Wilderness Preservation System unless otherwise provided by Act of Congress. No appropriation shall be available for payment of expenses or salaries for administration of the National Wilderness Preservation System as a separate unit nor shall any appropriations be available for additional personnel stated as being required solely for the purpose of managing or administering areas solely because they are

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# introduction

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Since its inception in 1905, the U.S. Forest Service has been entrusted by the American people with the conservation of many unique and important resources. Whether geological, biological, or cultural, these resources remain integral to the American experience and help shape a remarkable landscape. One of those cultural resources, the traditional use of pack stock as part of minimum tool practices in wilderness, currently faces an uncertain future. While it boasts a long history within the agency and played a significant role in the settlement and development of this country, pack stock use is fast becoming a vanishing skill and a lost art. Yet no one within the Forest Service fifty years ago would have predicted such an inauspicious outlook for the use of pack stock on National Forest System Lands.



*A pack string transporting drinking water and supplies to men working on the Boulder Mountain Fire on the Tonto National Forest in 1936.*

*An Inyo National Forest packer and his mule take a moment to appreciate the scenery of the John Muir Wilderness.*



In the early 1900s, the Pacific Southwest Region (Region 5) hosted a flourishing stock program. At that time, approximately 2,000 head of stock and more than 100 packers comprised the program, which regularly supported timber, fire, and trail crews in both front and backcountry settings. By the 1960s, however, the number of stock dropped to between 500 and 800 animals and the number of packers dwindled to between 25 and 40 individuals. In 1980, the number of stock region-wide dropped dramatically to between 250 and 500 animals, with packers suffering a similar reduction in force. By 2005, the program had shrunk to just 145 animals and 14 packers with a total of seven

remaining forests in Region 5 participating. Today, only 120 animals and seven permanent packers remain in the Region. While pack stock resources have declined, the amount of designated wilderness in Region 5 has steadily increased from the approximate 1.2 million acres included in the original Wilderness Act of 1964 to the 5.5 million acres Region 5 currently manages. There is ongoing active legislation to designate additional wilderness areas as well as many areas that have been recommended in forest planning for future designation by Congress.

*A Forest Service packer prepares to depart with his string at Twin Buttes on the Gifford Pinchot National Forest in 1911.*



Attributed to the growing use of more modern equipment, the expansion of transportation infrastructure (roads), and motorized travel, this noticeable decline in the stock program and the unique skillset it possess will likely not be replaced with a new generation of packers and pack stock unless immediate

action is taken to ensure the programs survival. This steady decline has reached a critical juncture: within a matter of a few more short years, the last of the remaining Region 5 Forest Service packers, and their animals, will have retired. Once vacated, these positions and the unique skillset they possess will not likely be replaced unless additional program support, leadership and skilled individuals are available. The Region's current investment in infrastructure to support the pack stock program is estimated at \$2.9 million including 120 working animals, tack and facilities; without continued support for



*Leading a string of mules laden with bridge building materials up the trail in the John Muir Wilderness.*

the program this investment would be lost. Through attrition and declining budgets, Region 5's stock program sits on the brink of extinction. Despite this bleak outlook, an opportunity exists to stop this trend and reinvest in what has been a historically significant program for the Forest Service that is critical to wilderness management, ensuring its continued survival.

The remaining few packers and program supporters on the Inyo, Klamath, Los Padres, Mendocino, Shasta-Trinity, Sierra, and Stanislaus National Forests propose the development of a regional Center of Pack Stock Excellence. This concept is also strongly supported and viewed as crucial by the Region 5 Wilderness Program Leader. The following business proposal presents a vision of this endeavor.



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# vision

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*“...To secure for the American people of present and future generations the benefits of an enduring resource of wilderness...”*

Provide regional coordination for the efficient utilization of pack stock program resources to support the efforts of wilderness managers in preserving wilderness character, and to ensure ongoing capability for use of primitive skills and tools, by offering high quality, hands-on pack stock and primitive skills education, practical experience, community outreach, and field-going services in support of fire, ecosystem, and wilderness management.



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# structure and roles

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*“...For this purpose there is hereby established a National Wilderness Preservation System to be composed of federally owned areas...”*

## **What is a Center of Excellence?**

The Center of Excellence concept has been successfully applied to a number of programs throughout the agency. It is generally defined as a team of people (part-time or full time) that promote collaboration and use best practices around a specific focus area to drive business results. A Center of Excellence should provide:

- Support for their area of focus through services and subject matter experts.
- Guidance through development of standards, methodologies, tools and knowledge repositories
- Shared learning through training and certifications, skill assessments, and team building.
- Measurements to demonstrate that they are delivering the valued results that justified their creation.
- Governance through allocating limited resources (money, people, etc.) across all their possible projects to ensure agency investment in the most valuable projects and create economies of scale for their service offering.

## **Proposed Structure for the Pack Stock Center of Excellence**

The Pack Stock Center of Excellence would operate at a regional level under the guidance of the regional wilderness program leader and a committee consisting of a representative from the two host forests and from each of the participating forests. This committee would work together to develop a charter for the Center. It is proposed that the day-to-day operation of the Pack Stock Center of Excellence operate under the leadership of two co-directors. One director would focus on north zone needs for the region and would be based on the Shasta-Trinity National Forest, while the other director would be based on the Inyo National Forest to coordinate south zone needs. Initially, these two forests would serve as the

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host forests, however, over time the hosting roles could potentially shift to other forests within in the region. The co-director duties would be approximately 25% of the individual's position. Each Center location would also have a master packer. The master packers would be funded for 100 days each. (Please see Appendices A and B for detailed description of the roles and duties of the co-directors and master packers.) Additionally, each year, four interns would be recruited, trained by the master packers, and placed (two in the north and two in the south zone) within the participating forests.

Participating forests are the non-host forests that still have an active pack stock program. Currently this includes the Sierra, Los Padres, Mendocino, Stanislaus, and Klamath National Forests, but could include others in the future if an active pack stock program is reestablished. These non-host forests play an important role in the Center. When not in use for priority work needs on the their forest, they would allow their pack stock program resources to be part of the regional pool that can be tapped into and mobilized to meet regional needs for pack stock projects, training, outreach and emergency response for fire, search and rescue, and law enforcement. Participating forests will benefit in several ways:

- Packing Interns – each year the Center will recruit and provide funding for four seasonal interns to be placed with pack strings on one of the seven forests.
- Replacement Stock – each year the Center will purchase and train 4 new animals, which can be loaned or reassigned to forests with active pack stock programs.
- Improved Coordination – the Center will serve as a one-stop shop for any and all pack stock related needs both operational and training. By capitalizing on the strengths and abilities of the seven stock programs remaining in Region 5, the Center will function as a networking system that managers can turn when in need pack stock related services. This will also provide opportunities for underfunded pack stock employees to work on funded projects on other forests.
- Financial Support – an annual \$6000 allocation to help support animal feed.

## **The Role of the Pack Stock Center of Excellence**

The Center co-directors will work together to (also see Appendices A and B for extended list of responsibilities):

- Provide leadership and representation of the Center's mission for Region 5.
- Coordinate and manage Forest and Region 5 pack stock support needs.
- Coordinate with co-director and lead packers to ensure management consistency.
- Develop, plan, review, and schedule individual forest pack stock programs with master packers.
- Foster partnerships and develop cooperative agreements with Back Country Horsemen of America, Wilderness Riders, Pacific Crest Trail Association, Student Conservation Association, California Conservation Corps, and other groups and agencies.
- Integrate safety into all Center-related activities and develop job hazard analyses (JHA) for stock use and handling for the Region; share JHAs with partner organizations and volunteers.
- Market the Region 5 Packing Program by participating in annual equine events such as Cal-Expo in Sacramento, California; Regional Back Country Horsemen of America's Workshops; California Conservation Corps (CCC) and Student Conservation Association (SCA) Regional Trainings; Mule Days in Bishop, California; and Equine Affaire in Pomona, California.
- Develop and present field training sessions with support from master packers for wilderness rangers, fire personnel, range technicians, staff officers, and employees that have a need to learn about safe pack stock handling and use.
- Coordinate and assist with trainings at regional packing schools, district sessions, and Wilderness Ranger Academies.
- Lend expertise to individual units interested in developing pack stock programs on Forest.
- Develop and maintain a program for acquiring and training livestock for use in the Region.
- Develop and provide ongoing wilderness education programs focused on Leave No Trace and other outdoor camping ethics.

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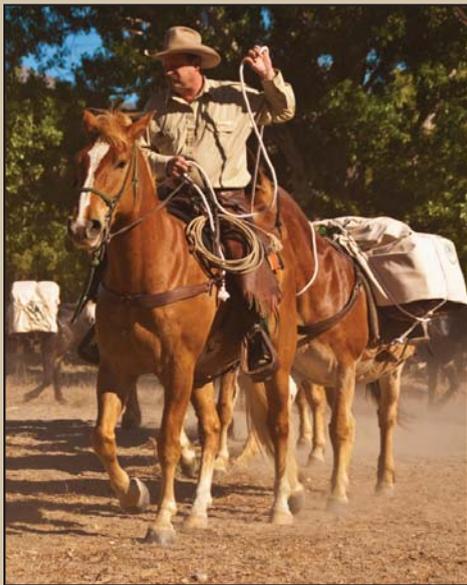
# benefits

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*“...These shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness...”*

## Improved Coordination

The Center will serve as a one-stop shop for education, training, and operational stock and traditional tool-related needs. By capitalizing on the strengths and abilities of the seven stock programs remaining in Region 5, the Center will function as a networking system to which managers



*A member of the R5 Pack Stock Program (now retired) from the Stanislaus National Forest demonstrates packing techniques at the California Horse Expo clinic in 2008.*

can turn when in need of any of the services listed below. This approach will not only increase the Region’s ability to mobilize stock resources quickly and efficiently but also adds capacity to the Agency’s ability to accomplish a wide variety of projects using primitive, low-impact methods. Services will include:

- Wildland fire support
- Training (stock use)
- Training (primitive tools/techniques)
- Trail project support
- Resource project support
- Project oversight
- Expertise and consulting
- Development of Job Hazard Analyses (JHAs)
- Public and internal outreach and education
- Law enforcement support

## Education and Training

The program's educational component will focus primarily on the use of pack stock as a minimum impact, traditional tool. Additional emphasis will be placed on the history and significance of the Wilderness Act as well as the use and application of primitive tools and trail construction techniques. The curriculum will be taught using a combination of Forest Service packers and resource specialists, as well as instructors from wilderness and pack stock partner organizations, all of whom possess decades of experience working with stock in a multitude of settings and capacities. Agency personnel who may find part or all of the Center's learning opportunities relevant to their programs of work include wilderness managers, trail crews, fire personnel, individuals from a variety of natural resource disciplines (e.g., range, wildlife, botany, hydrology, archaeology, fisheries, etc.), safety officers, and volunteers. The following is a sampling of the types of educational and training programs the Center would have the expertise to offer to our regional employees and our stewardship partners and volunteers:

- Introduction to the Wilderness Act of 1964
- Principles of Leave-No-Trace (LNT) and
- Low Impact Camping with Stock
- Application and Use of Primitive Tools/ Methods
- Cross-cut Saw Certification
- Fundamentals of Safe Stock Handling Practices
- Basics of Freight: Safe and Secure Make-up of Packed Loads
- Safe Trailering Practices
- Basic Horsemanship
- Proper Handling and Care of Pack Animals
- Basics of Veterinary Care in the Field
- Fundamentals of Camping with Stock
- Trail Safety
- Appropriate Behavior Working Near Stock
- Adaptability, Utility, and Adeptness of Stock in Wildland Fire Settings
- Minimum Impact Suppression Tactics Using Stock
- Fire Certification for Packers (task book review)

These are some of the general methods that would be employed to implement training and education sessions however the Center staff has the flexibility to develop the delivery methods that will best meet specific program needs.

- Classroom settings (1- to 8-hour sessions)
- Practical sessions (hands-on clinics, field trials)
- Digital presentations (long-distance, self-paced learning)
- Multi-day clinics
- Guest lecturers
- Internships



*An Inyo National Forest employee demonstrates packing fire equipment to spectators at the 2010 California Horse Expo.*

# Safety

Safety will be a key component and will be integrated into all Center-related activities. The co-directors will be available represent the region and to participate in national discussions regarding national pack stock and primitive tool safety policy.

The Center will:

- Facilitate establishing a “culture of safety” relative to pack stock use and horsemanship
- Develop Job hazard analyses (JHA) for stock use and handling for the Region
- Share JHAs with partner organizations and volunteers.
- Provide training and supervised practice for agency staff and partners on safe use of pack stock, riding animals and primitive tools
- Provide recommendations for safety equipment and tack options



*Students from the California Conservation Corps gather around a presentation on safe stock handling practices at McClellan Airforce Base.*

## Engaging Youth

Skill in working with primitive tools, particularly working with pack stock, is dwindling in the Region as an aging FS workforce begins to retire. Without action we risk losing this unique skillset and the understanding of the great capability this tool provides. The Center will help to address this challenge in two ways.

First, each year the Center will recruit and train four interns (two in the North and two in the South). Interns would be placed on Forests throughout the Region providing them with an opportunity to work with and learn from seasoned packers. This will help to develop a new generation of packers (and provide hosting forests with additional capacity at the same time).

Second, the Center will provide Forests with additional capacity to host youth programs in the wilderness. We live in a changing America, where our engagement with the natural world is influenced by complex



*A new intern in the Inyo National Forest's stock program, this packer leads his string down the trail after supplying a trail crew with necessary food and equipment in McGee Canyon.*

factors, including our increasingly mobile and technology-connected society. Amid these changes, re-establishing a connection to the natural world is critical for a sustainable future. With pack support for food resupplies, partnerships with programs such as the Backcountry COCC allow forests to expose youth crews to remote wilderness locations. For youth participants, this exposure to wilderness and primitive tools can instill a lifelong land ethic and connection with public lands as places for recreating, learning and volunteering, that they will carry with them for the rest of their lives.

## Community Outreach

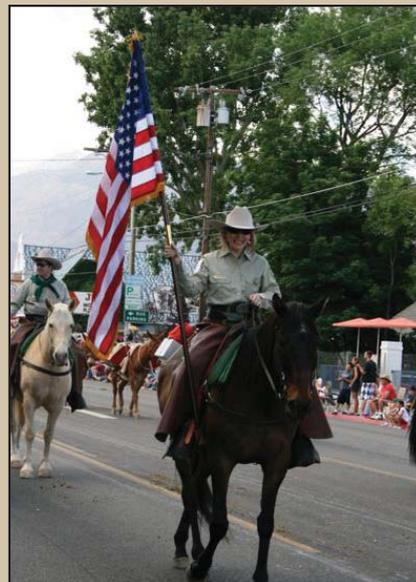
Maintaining a connection with the public for whom we serve remains vital to achieving the Agency's mission. "Caring for the land and serving people" is not an achievable goal if we do not involve ourselves in community activities and events. Whether participating in a July 4th parade, appearing at special events, or maintaining a visible presence on National Forest System (NFS) lands, the Agency reminds the public of its dedication to the management of their landscape. At a time when public support of government spending is waning and the disconnect between the American people and their public lands grows, providing a well-recognized and welcomed symbol of federal land stewardship has never been more important.

Since its founding in 1969, the City of Bishop's annual Mule Days event has included representation from the U.S. Forest Service. The Regional stock program's Mule Days parade entry, featuring mounted flagbearers, pack strings, wagons, and marching fire and youth crews from multiple



*The Forest Service participants of the 2010 Mule Days parade.*

*An Inyo National Forest employee proudly carries the American flag in the 2009 Mule Days parade.*



national  
forest

units, has always drawn respect and appreciation from the on-looking crowd. Seeing firefighters fully-dressed in nomex with pulaskis in-hand walk down Main Street alongside a string of mules carrying fire equipment reminds grateful community members of the invaluable service the Forest Service has provided in defending their homes and property from wildland fires. So much so, that it is difficult to envision a future Mule Days parade without the Agency's

participation. The Forest Service is not alone in the belief that its involvement in such a high-profile community event is important; the National Park Service and the Bureau of Land Management also dispatch teams of riders, handlers, and stock to represent their organizations in the parade line-up.

In addition to parades, the Forest Service has also sent representatives (and pack strings) to special events across the State of California. For the last three years, a pack stock contingent from Region 5 has attended the Equine Affair event in Pomona, the California Horse Expo in Sacramento, and the Backcountry Horsemen's Association Rendezvous Conference (various locations in California).

These appearances help communicate the Agency's unique mission and its many accomplishments to the public. They also provide the public with the opportunity to engage in face-to-face, real-time dialogues with Agency personnel, further cultivating an understanding of what the Forest Service actually

does on behalf of the public. The Pack Stock Center of Excellence could continue this tradition of community outreach by providing the necessary resources to other forests in the Region that lack their own packing programs but are keen to participate in special events.



***A Forest Service packer leads his string carrying fire equipment into the main arena as part of the Mule Days Grand Entry parade event.***

## Ecosystem Management and Restoration

Approximately 23% of the Pacific Southwest Region's acres are designated as wilderness and are a critical component for achieving success with our ecological restoration goals. Wilderness provides important protection for watersheds, wildlife corridors and connectors tying together larger protected landscape mosaics which are critical to sustaining viable, resilient ecosystems in the face of climate change. These areas provide critical ecosystem services including clean air, clean water, and biodiverse habitats that support wildlife. Wilderness is a very important baseline for scientists tracking changes caused by climate change, including major alterations occurring in water regimes. Many activities in wilderness support ecosystem management and restoration. Proper management of fire in wilderness will minimize the adverse effects of climate change on catastrophic fire and subsequent effects on water quality and quantity. Monitoring of sensitive receptors for changes to air quality can show us deviation from baseline and can allow us to address air quality not just for wilderness but for surrounding communities. Identification and removal of non-native invasive plants will contribute to restoration of watersheds, allow for native species to flourish and provide better habitat. Regular monitoring of campsite conditions, and subsequent management, will minimize adverse effects of recreation on water quality. Many of these activities utilize pack stock support.

The Center will provide training and support to the following programs that are engaged in important wilderness ecosystem management, and other resource-related activities supporting ecosystem restoration goals, that utilize pack stock and primitive tools:

- Botany Program
- Heritage Program
- Range Monitoring Program
- Watershed Program
- Wilderness Program
- Wildlife Program
- Air Resources Program
- Fire Management
- Research
- Law Enforcement



*Three mule strings head down the trail carrying supplies in support of the Basin Fire on the Los Padres National Forest in 2008.*

# funding

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*“...Which is protected and managed so as to preserve its natural conditions and which generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable...”*

The modest funding that the Region 5 stock program currently receives allows it to accomplish a limited number of projects on an annual basis. With dwindling appropriated budgets and an uncertain future, the ability of the program’s managers to formulate stock plans for out years and enter into contractual work agreements with other forests and agencies is extremely limited. In short,



the program cannot function as effectively nor meet its full potential as a Regional Pack Stock Center of Excellence without a healthier fiscal commitment from additional funding sources. With additional funding garnered from both internal and external sources, the current stock program could better meet the needs of the Region. The resulting fiscal stability would increase the program’s capacity to plan for and respond to region-wide fire, resource, wilderness and trails support needs.

The table on the following page summarizes the Region 5 Pack Stock Program’s proposed funding levels necessary to support a more robust stock program via the development of a Pack Stock Center of Excellence with two hubs (north and south zones) to better serve the eighteen units. Funds dedicated to the program would help support a network of stock programs region-wide, currently based on seven Forests. Salary requirements indicated below would help fund two co-directors of the Center along with minimal support staff. To maintain the Center’s capacity to deliver Region 5 targets, incremental fiscal contributions would go towards the upkeep and training of livestock, basic facility maintenance, training, and travel costs. No particular unit’s stock program would singularly benefit from these contributions.

Primary leadership for the Center, however, would be initially based on the Shasta-Trinity (North Zone) and Inyo (South Zone) National Forests.

When reviewing the funding amounts, it is important to recognize that these figures reflect base costs necessary to maintain a basic capacity and the costs of project support in most cases would be paid by the units using the services. Many of the services this capability supports entail accomplishing projects in a different or expanded way and would represent a shift in how units are currently meeting their targets (e.g., helicopter flights for resupplying fire crews). In the case of the latter, significant savings and increased safety could be achieved if pack stock were utilized in lieu of helicopters. The center would provide six on-forest trainings per year (three in the north zone and three in the south) at no cost to the hosting unit – a call letter for this service would be issued each fiscal year. In addition, each year forests with existing packing programs would have the opportunity to request placement of one of the four interns (two interns in the north and two in the south) on their forest and to utilize stock acquired by the center (either on loan or a permanent assignment).

Multiple BLI funding will be requested for the base funding from the regional programs that will be supported by the Center of Excellence. It is anticipated that within a three to five year time frame, through a combination course tuition fees, interagency participating agreements, stewardship partner support, grants, and possibly even corporate sponsorship, that the Center could be at least partially self-sustaining thereby reducing the amount of support required from allocated funds in future years once established. Pursuing these opportunities will be a high priority for the Center from the outset of its establishment.



**Pack Stock Center of Excellence:  
Fixed Operating Costs for Each Zone (North and South)**

	<b>DESCRIPTION</b>	<b>RATE</b>	<b>UNIT</b>	<b>QTY</b>	<b>SUB-TOTAL</b>
<b>STAFF COSTS</b>	Center Director (GS-9)	\$295.00	Day	65	\$19,175.00
	Lead Packer (WG-7)	\$300.00	Day	100	\$30,000.00
	Intern (WG-3)	\$190.00	Day	200	\$38,000.00
	Travel (three 2-day sessions with 2 instructors for training fire crews) plus 10 days of travel for Center-related coordination and oversight activities.	\$2,400.00	Ea	1	\$9,200.00
<b>FLEET</b>	Pick-Up Truck (FOR)	\$4,000.00	Year	1	\$4,000.00
	20-ft Stock Trailer (FOR)	\$2,000.00	Year	1	\$2,000.00
	Mileage	\$2,000.00	Year	1	\$2,000.00
<b>MATERIALS &amp; SUPPLIES</b>	Feed (hay and supplements)	\$6,000.00	Year	1	\$6,000.00
	Veterinary Care	\$4,000.00	Year	1	\$4,000.00
	Tack/Harness Replacement	\$2,000.00	Year	1	\$2,000.00
	Shoeing (occurs 2-3 times per year)	\$3,000.00	Year	1	\$3,000.00
	Livestock Replacement (covers cost of 4 new animals and their training, if needed; these would be loaned out or assigned to participating units)	\$8,000.00	Year	1	\$8,000.00
<b>MISC.</b>	Pamphlets, Hand-outs, and Educational Materials	\$1,500.00	Year	1	\$1,500.00
	Facility Maintenance (general repairs, cost of wear and tear, utilities associated with hosting stock programs)	\$16,000.00	Year	1	\$16,000.00
<b>SUB-TOTAL (Each Zone)</b>					<b>\$144,875.00</b>
<b>SUB-TOTAL (Both Zones)</b>					<b>\$289,750.00</b>
<b>Supplement to each of the other R5 Forests with pack strings supporting the Regional program: \$6,000 x 5</b>					<b>\$30,000.00</b>
<b>TOTAL</b>					<b>\$319,750.00</b>

Note: Rates shown are based on the USDA FS WorkPlan System Version 3.7, EMIS vehicle estimates, and stock manager estimates.

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# future opportunities

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As the program becomes more established, with additional funding and support, the Pack Stock Center of Excellence would pursue the following additional targets:

- Explore interagency opportunities for working together, as appropriate, to improve customer service and operational efficiency in the delivery of training and education in California. The NPS has already expressed an interest in exploring this opportunity. If expanded to an interagency effort, the Center could eventually operate under a Service First partnership authority.
- Pursue and develop stewardship partner and corporate partnership opportunities as well as grant opportunities for financial support of the Center with a goal of eventually becoming as self-sustaining as possible.
- Market the Center's services to external entities in order to generate additional funding for the program.
- Develop a winter pasture program similar to the one offered by the Ninemile Wildlands Training Center and funded by the Northern Region (Region 1). In Region 1 the RO pays for 200 of their



*A packer resupplies a trail crew assigned to a catastrophic blowdown event in the John Muir and Ansel Adams Wildernesses in July 2012.*

region's 400 head of stock to have winter pasture and winter care. This ensures proper attention and overwinter care and helps forests who do not maintain year-round staff that have stock care expertise. It also saves the forests feed costs for the months that they participate in the winter care program.

- Expand the internship program.
- Provide greater integration with regional fire training sessions.
- Development of satellite training centers by improving upon existing facilities on the Los Padres and Shasta-Trinity National Forests.

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# regional contacts

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The following individuals are the primary architects of this proposal serve as points of contact for additional information:

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# appendix a

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## **Roles and Responsibilities of the Center of Excellence Co-Directors**

### Oversight and Coordination:

- Provide oversight and representation of the overall mission of the Center of Excellence (COE) to the Region and Forests.
- Coordinate with other Forests with requested needs from the COE.
- Coordinate with fellow co-director and master packers on a regular basis to provide consistency in the management of and responsibilities for both COE.
- Manage the demands of the regional needs for packing either on fire assignments or packing operations for wilderness projects.
- Review, schedule, plan and develop packing programs with the master packer.
- Manage and track the allocated budget for the COE.



### Promote Safety:

- Build job hazard analysis for regional and forest service units defining and mitigating hazards associated with the handling of stock when packing, loading, unloading, haltering, saddling, catching, trailering, feeding, shoeing and high lining. These are to be made available to partners and forest service units.

## Develop and Implement Training and Education Programs:

*A Forest Service packer hauls a load of supplies and tools to trail crews located on the Modoc National Forest.*

- Coordinate and assist in developing field training sessions with support from the master packer for wilderness rangers, fire personnel, range technicians, staff officers and employees that have a need to learn about livestock. For example, trainings have been provided at annual fire refreshers, and at the Wilderness Ranger Academy.
- Assist in tailoring sessions to accommodate 1-8 hours of training depending on regional, forest or district need.
- Hands on demonstrations of Leave No Trace stock practices and outdoor ethics.



## Marketing and Partnership Development:

- Develop PowerPoint presentations for management and units regarding the overall mission of the COE.
- Foster partnerships and develop agreements for training with BCH, PCTA, SCA, ACE, and CCC.
- Market COE by attending Cal- Expo, Regional Backcountry Horseman Association workshop, California Conservation Corps regional training, Student Conservation Association regional training, Mule Days in Bishop, CA and Equine Affaire in Pomona, CA.

### Provide Technical Expertise:

- Provide the expertise to assist any forest needing to develop a stock program includes the master packer for “on the ground training”.
- Recognize and jointly develop a training center for purchasing and training livestock for the region.

### Project Planning and Oversight:

- Provide support for projects that have the potential for utilizing stock as a minimum tool. This includes providing estimated cost, safety mitigation, feasibility, and scope of work, including recruitment for packer availability to assist with projects.

### Manage Intern Program and Succession Planning:

- Coordinate the hiring and training animal science and fire college-bound interns. As the agency develops expertise in animal packing, agency retention of the art of packing can be accomplished through equestrian interns and interested fire personnel.
- Set-up the process for red carding packers and being fire pack string ready at three levels to accommodate Type 1, Type 2 and Type 3 fires as well as fire monitoring and investigation.



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# appendix b

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## **Required Skills, Roles, and Responsibilities of the Pack Stock Center of Excellence Master Packers**

**A** Master Packer must be able to perform his/her job in a safe, efficient, and professional manner that is an asset to the Forest Service. He or she must be able to demonstrate experience and proficiency in all of these skills.

### People Skills:

- Must be able to work with the public, volunteers, and fellow Forest Service workers in a professional manner. Be responsible for others' safety when working around stock. Able to manage the safety of coworkers and volunteers in the wilderness as well as the well-being of pack stock while limiting stock impact on the wilderness resource. Able to train and direct coworkers and volunteers in saddle and pack animal safety, wilderness stock use, packing, and animal care. Knowledge of and ability to prepare JHAs for all situations with livestock. Serve as an ambassador of the Forest Service. Be able to complete a pack trip with up to 5 people and 10 head of stock for a week by his- or herself.

### Stock Skills (must also have the skill and knowledge to do all of the following):

- Train green horses and mules for saddle, pack, and draft purposes. Provide vet care to stock including but not limited to intravenous and intramuscular shots and treatment of wounds. Must be able to handle emergency situations safely for animals and humans and be able to evaluate medical conditions. Ability to dispatch a horse or mule if necessary, use restraints for doctoring, shoeing, training, or containment purposes. Evaluate stock for soundness, conformation, health, conditioning, and safety for use (service). Ability to ascertain and assign correct shoeing of horses and mules for working in a mountain environment. Properly fit all types of riding saddles, pack saddles, and work harness to mules and horses. Able to conduct safety inspections of all riding,

pack, and draft equipment before using equipment on the job. Understand all aspects of saddle and pack animal safety.

Driving Skills (must also have the skill and knowledge to do all of the following):

- Must possess a valid California CDL (Class A). Able to drive both manual and automatic transmission vehicles in mountainous terrain and severe weather conditions, including snow. Pull up to 24' gooseneck stock trailers and bumper-pull stock trailers. Safely haul up to eight head of stock at one time on rugged mountain roads, tight turnarounds, extreme grades, busy highways and roads, in all weather conditions. Load, unload, and haul for long periods of time without damage to animals or equipment. Haul gear, equipment, supplies, and hay on flatbed trucks and trailers. Haul tractor and equipment.

Wilderness Skills

- Including but not limited to possession of understanding of stock use ethics, including Leave-No-Trace Master Skills and backcountry stock use procedures. Mountain and camping skills, (e.g., campsite selection, backcountry stock containment, grazing, etc.). Assess trail safety and conditions. Must be able to be by oneself in the wild and take care of stock in all conditions up to 10 days at a time. Be responsible for others in your care in the backcountry. Knowledge of wilderness regulations. The Forest Service packer is highly visible in the backcountry and needs to be an ambassador for the agency.



*An Inyo National Forest intern leads a string of mules carrying an awkward load of lumber out of McGee Canyon.*

### Packing Skills:

- Including but not limited to packing logistics and scheduling. Expertise in packing sawbuck, Decker, Salmon River, and Phillips saddles. Safely lead pack strings through all types of conditions. Packing trail crews and equipment such as food, tents, tools, rockbars, rock drills, explosives, wheelbarrows, sleds. Packing trail maintenance materials such as poles, lumber, sand, gravel. Arrange animals and pack loads in the proper order when putting a string together. Able to tie a pack string together for every situation. Build balanced loads using pack bags, slings, boxes, many loads with sling ropes, pack racks, etc. Tie multiple hitches (e.g., box, diamond, sling, etc.). Ability to tie knots.

### Other Job Related Skills:

- Ranch and pasture management (including grazing). Design, building, maintenance, and safety inspections of stock facilities. Building and maintaining fence (including board, pole, pipe, wire, and electric fencing). Flood irrigation of native pastures. Tractor and equipment operation. Experience with teams and single draft animals. Trail maintenance and use of tools. Knowledge of trail construction. Able to repair saddle and pack equipment. Knowledge and experience of selecting and purchasing horses and mules. Knowledge and experience of selecting and purchasing feed. Have red card certification or the ability to obtain it.

### Teaching Skills:

- Must meet all requirements above to be an instructor of the following classes: Saddle and pack animal handling classes; packing classes (beginner, intermediate, and advanced); JHAs for livestock; wilderness training for firefighters; Leave-No-Trace skills; and stock use on fires.

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# appendix c

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## **Sample Program of Work Achieved by a Wilderness Supervisor, One Master Packer, and Two Summer Interns over a Two-Year Span**

### Trail, Wilderness, and Restoration Projects:

- Supported resource crews (200 mule loads).
- Packed in, resupplied, moved, and packed out two 20-person CCC trail crews and one Green Corps crew for a full summer season. (320 mule loads).
- Supported partner organizations and volunteer groups working on trail and restoration projects including SCA, PCTA, Friends of the Inyo, American Conservation Experience, CalTrout, American Hiking Association. (658 mule loads).
- Packed in and packed out wilderness ranger camps.
- Designed, constructed, packed in, and installed structure to repair unsafe footbridge on a popular Wilderness trail.

### Fire support:

- All three Forest pack stock program personnel obtained Fire Fighter Type 2 (“red card”) certification.
- Provided stock support to the Lion Fire on the Sequoia National Forest, including designing and assembling a trailhead stock staging facility, traveling through burned area to supply crews, coordinating with Incident Command System and other pack stock programs within the region to meet fire management objectives, and eliminated the need for 20 helicopter trips into the wilderness. (520 mule loads).
- Packed out hose and other fire line supplies from a small fire incident.
- Developed and improved upon methods of packing fire supplies including water cubes, chainsaws, fuel, pumps, MREs, and tools.

## Education:

- Developed and presented one and two-day Leave No Trace and stock handling safety clinics at the annual Wilderness Ranger Academy on the Inyo National Forest.
- Trained over 450 firefighters on the Sequoia National Forest in working with pack stock on the fire line.
- Worked with the U.S. Marine Corps Mountain Warfare Training Center to provide stock training to troops.
- Provided demonstrations to the public of Forest Service pack stock use by invitation from the National Park Service at the centennial celebration for Devils Postpile National Monument.
- Participated in the annual Back Country Horsemen of America's Rendezvous, Equine Affaire Clinic, and CalExpo Horse Show.
- Trained three summer interns in the traditional skills of packing.
- Provided riding stock and mentoring for Forest Service personnel during an organized ride with the California Cattlemen's Association.



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