Sustainability and Wildland Fire

The Origins of Forest Service
Wildland Fire Research

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A Unity of Purpose: Forest Service Branch of Research 1915 - 2015
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**Major Themes:**
- Sustainability
- Forestry vs Fire
- Public Education

**Pinchot’s Goal (1903):**
- Replace “vague general notions” about fire with “carefully gathered facts.”
In 1876, Congress appropriated $2000 to investigate (i.e., research) the condition of the nation’s forested lands.

“…it is evident that the preservation and reproduction of our forests is the great question of the future, and the time is near at hand when we must begin to study its practical relations with earnestness.”

– Franklin B. Hough, 1876
“The nature and ways of action of forest fires and their effect on the composition and reproduction of forests have been very little studied. Such knowledge is so essential to the most effective work in preventing and fighting them that the absence of systematic attempts to collect it is to some degree a matter of surprise.”

-- Gifford Pinchot, 1898
Finding ways to control wildland fire was a very early research priority – before there even was a Forest Service. Starting in 1898, Pinchot:

- Established an Office of Investigations
- Organized collaborative investigations of fires in the West and Northeast, and proposed others for California and Oregon
- Initiated a study of forest fires reported in American newspapers – by 1901, had data from more than 10,000 fires
- Sent investigators into the field to investigate fire conditions (e.g., R.V.R. Reynolds to Wisconsin; he filed a 50-page report in 1903)
“The study of forest fires was begun by this Bureau in 1899 and was mainly confined to studies made in connection with other work and to a compilation of historical data until 1902. It was reorganized in that year and begun upon a basis of independent field studies.”

-- Forest Fires, ca. 1904

Oregon fire, 1904; Forest History Society photo
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Forest Service established 1905

“In the administration of the forest reserves it must be clearly borne in mind that all land is to be devoted to its most productive use for the permanent good of the whole people; and not for the temporary benefit of individuals or companies....”

-- James Wilson, Secretary Department of Agriculture, 1905

Girard Grove, Montana
The Protection of Forests From Fire, 1910

“The first measure necessary for the successful practice of forestry is protection from forest fires.”

- Henry S. Graves, 1910

Henry S. Graves
Tongass National Forest, 1915
In 1913, Coert DuBois sent out a letter to all California District Rangers

- The time had come to reduce fire protection to a science …
- They needed to identify what was known and what wasn’t so they could “really find something out about it”
- “There are no books to which we can turn to find out how to do this… It is clearly the task for us field men.”
- “This work means big things. Those who contribute largely to it are going to be known in American forestry.”
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“Those who contribute largely to it are going to be known in American forestry.”

**Julius Larsen** - Helped establish silviculture research in Northern Rockies and conducted early fire research

**Harry Gisborne** - First fulltime Forest Service fire researcher and national leader in fire research

**Jack Barrows** - Instrumental in securing funding for national fire laboratories
In 1919, in the Snake Lake area of No. California, S. B. Show and E. I. Kotok placed pine limbs alongside a few fire-scarred pines to ensure they would burn. Show’s research achieved “the gratifying result that [the trees] burned down and became damage statistics.” (S. B. Show, n.d.)
In 1912, Graves established a central committee on investigative work to advise him on research.
In 1913, he created a new Office of Forest Investigations, to bring researchers closer together and to make the entire force more directly available for investigations.
On June 1, 1915, Graves consolidated all research in a new Branch of Research to protect researchers from day-to-day management and give them the fullest possible recognition.
According to Earle Clapp, the policy of dumping unwanted men into research had so discredited the program that qualified men were reluctant to enter the field. In 1915, the Forest Service changed that policy, taking research out of the hands of local administrators and elevating it to a level of importance within the agency.

-- from Harold Steen, 2004
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Forest Service Investigative Report - 1916

- Develop method for rating risk to guide the distribution of funds for more scientific fire protection – one year project
- Study of relationship between weather conditions, fire hazard, and protection
- Investigate better methods of fire prevention, detection, and control
- Develop uniform principles for estimating the effects of fire

AKA the Holy Grail
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Forest Service Research

- “The object of forestry is to discover and apply the principles according to which forests are best managed.” (1903)
- The goal of fire research was to replace “vague general notions” with “carefully gathered facts.” (1903)
- “The documents upon the subject sill reside, with very few exceptions, in the forest itself.” (1899)
“The central thing for which Conservation stands is to make this country the best possible place to live in, both for us and our descendants.

It stands against the waste of the natural resources which cannot be renewed, such as coal and iron; it stands for the perpetuation of the resources which can be renewed, such as the food-producing soils and the forests; and most of all it stands for an equal opportunity for every American citizen to get his fair share of benefit from these resources, both now and hereafter.”

Gifford Pinchot, 1910