



*The Adirondack lean-to is aesthetically pleasing. Favorably located it seems almost an emanation of the forest floor. As a shelter, its marginal protection against wind, rain, and cold enables you to revel in all the minor inconveniences and discomfort of camp life. You confront, in the precise meaning of that verb, the essential facts of life, more truly than Thoreau did in his Walden hut. The open front invites big thoughts. Out there, unscreened after the fire dies down, is the untamed wilderness of our ancestors on the continent. -Jamieson, *The Adirondack Reader**



Historic Hiking Shelters

White Mountain National Forest
Sarah Jordan, Heritage Program Manager





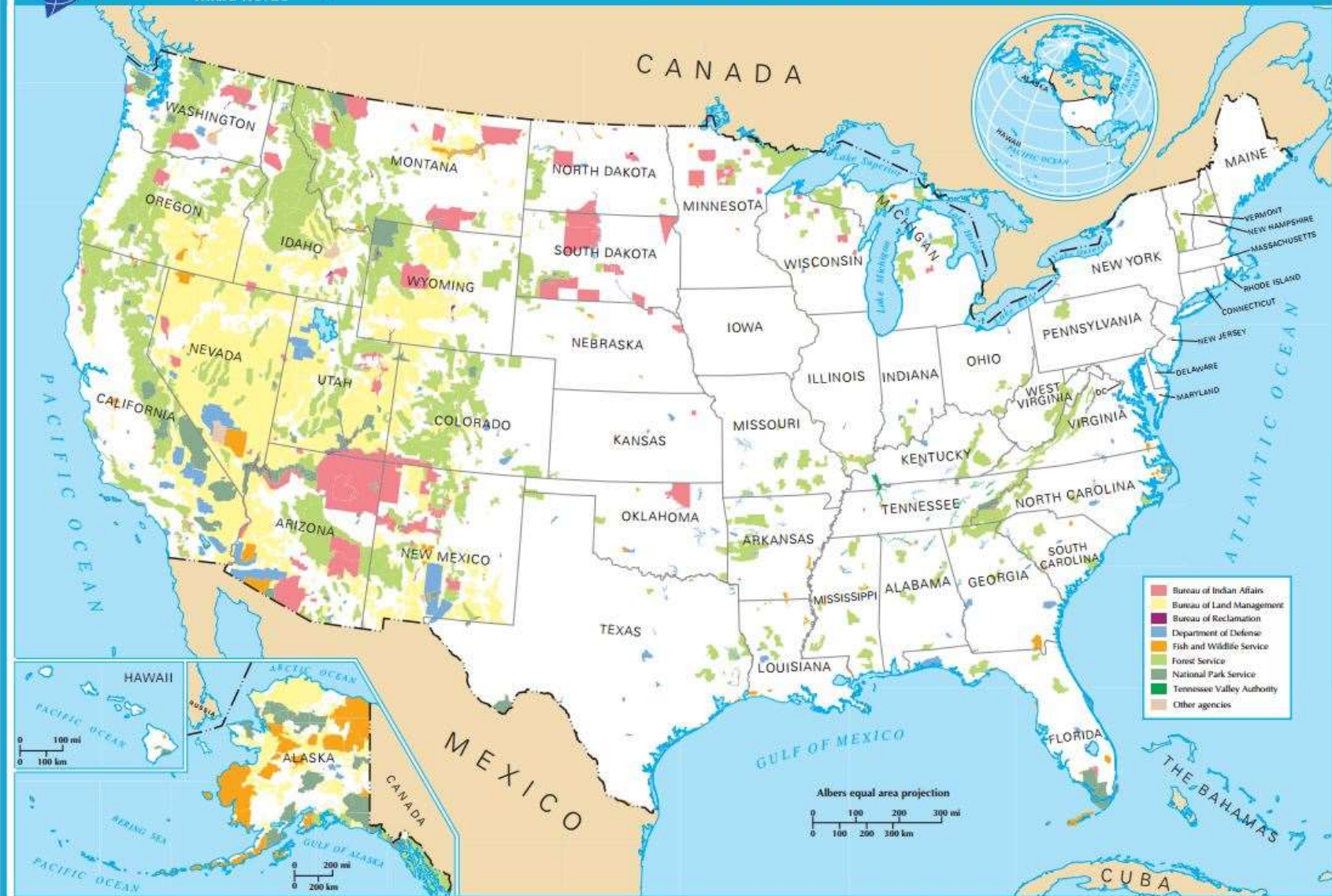
Is it a Park? Or a Forest? What is the difference?



MANAGEMENT	Department of Interior	Department of Agriculture
MISSION AND PURPOSE	“...to preserve unimpaired the natural and cultural resources and values of the National Park System for enjoyment, education, and inspiration of this and future generations.”	“...to sustain the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations.”
SIZE	84 million acres	193 million acres



FEDERAL LANDS AND INDIAN RESERVATIONS



U.S. Department of the Interior
U.S. Geological Survey

The National Atlas of the United States of America®

Revised 2013 INTERIOR-GEOLOGICAL SURVEY, RESTON, VIRGINIA-2013



The Project

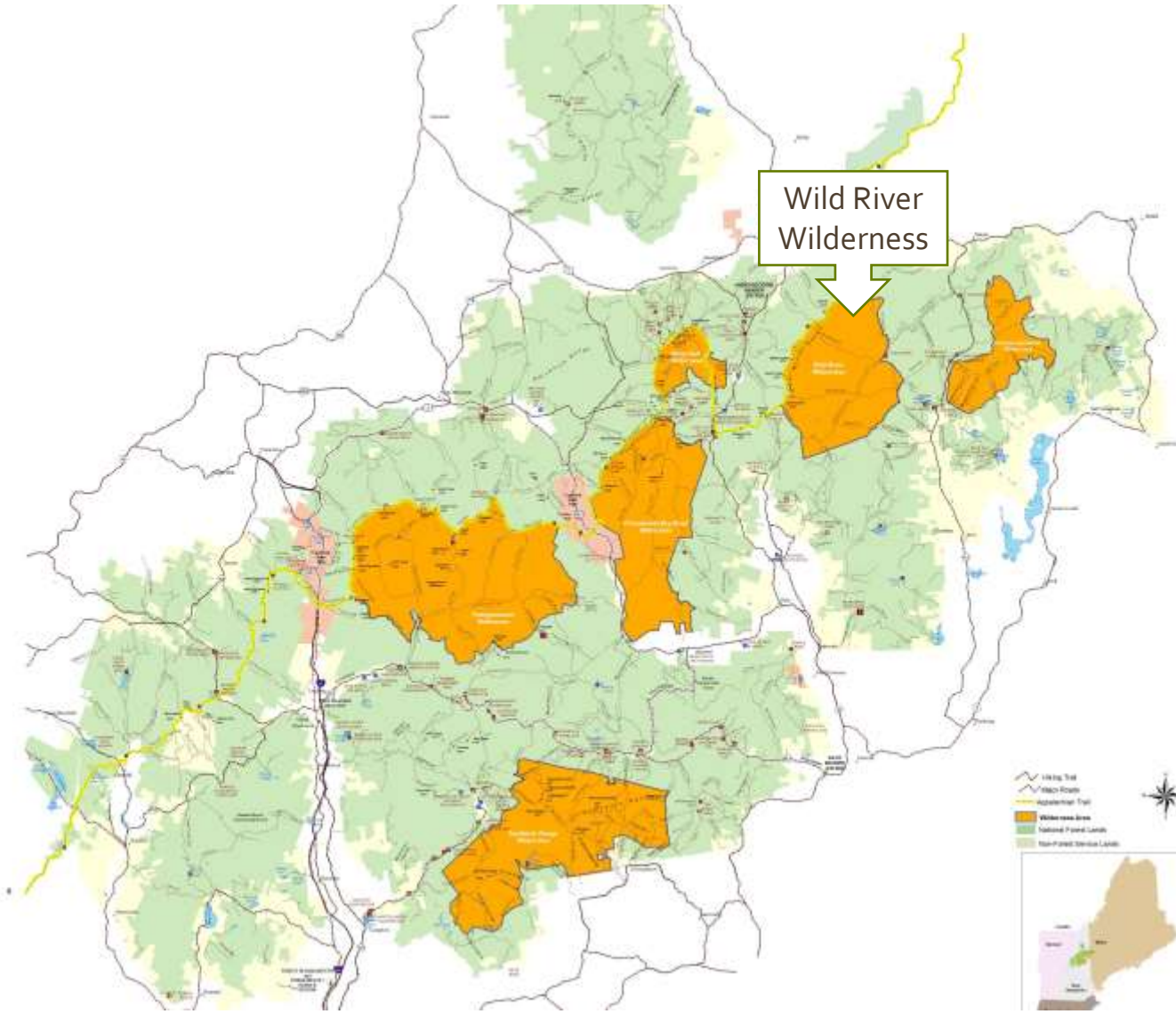
Wild River Wilderness Shelter Removal-Section 106

Undertaking:

- Removal of three hiking shelters from newly designated Wilderness Area proposed in 2007.
- One shelter determined eligible for the National Register of Historic Places
- Removal of eligible shelter is an adverse effect

Mitigation:

- Development of thematic overview of hiking shelters on the White Mountain National Forest
- Interpretive information about hiking shelter history
- Memorandum of Agreement signed in 2010.



White Mountain National Forest Wilderness Areas

The White Mountain National Forest contains approximately 148,000 acres of Congressionally-designated Wilderness.

The Wilderness Act of 1964



The signing of the Wilderness Act into law by President Lyndon B. Johnson on September 3, 1964.

Definition of Wilderness

“A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or **historical** value.”

Historic Structures in Wilderness

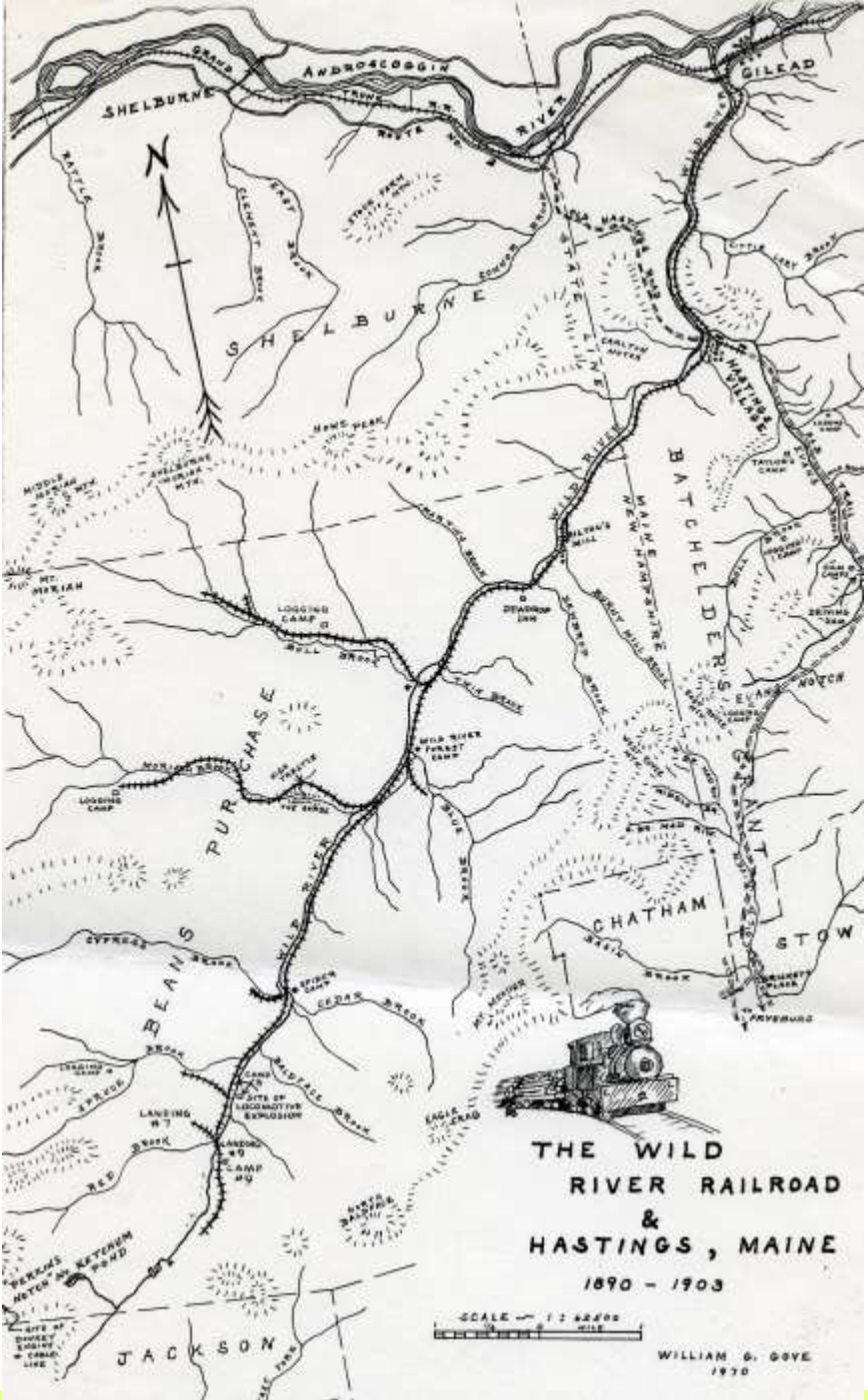
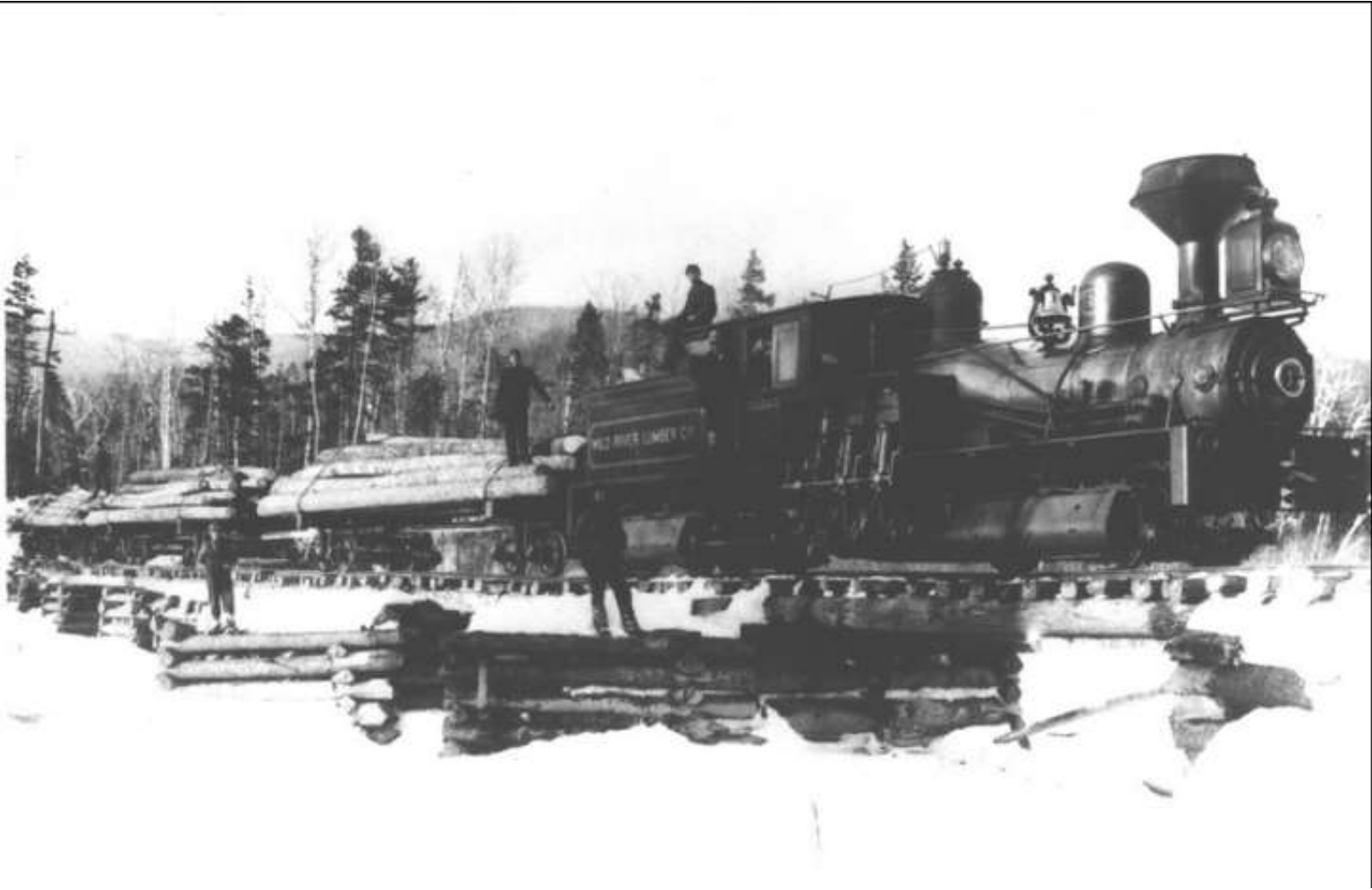
All federal agencies who manage Wilderness have struggled with how to balance the Wilderness Act and the NHPA.

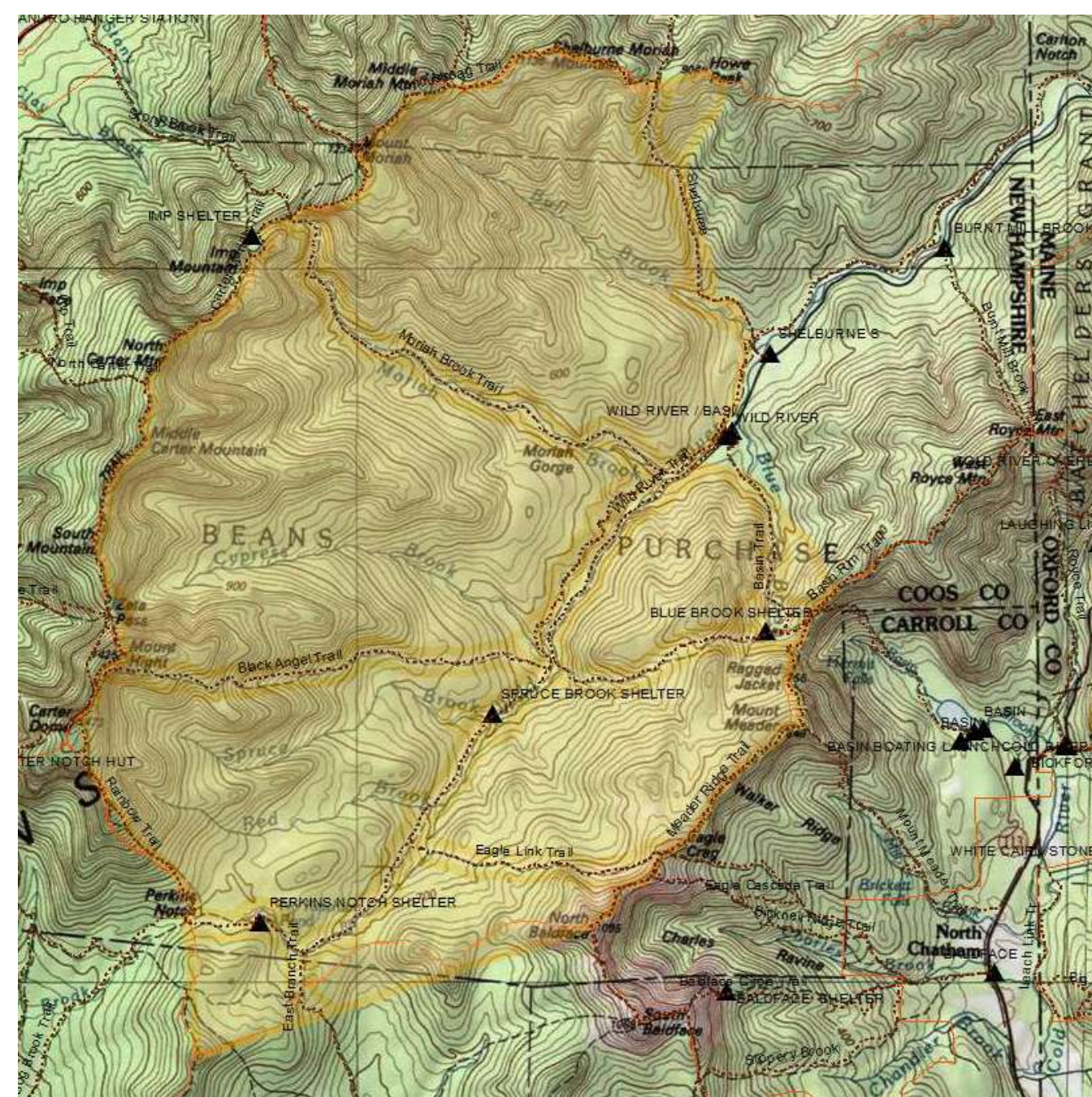
Current WMNF policy is to reduce the developed recreation footprint in Wilderness.

National Wilderness Preservation System



The Wild River Railroad





The Wild River Wilderness

The United States Congress established the 24,032 acre Wild River Wilderness in 2006 with the passage of the New England Wilderness Act.

The majority is in the unincorporated town of Bean's Purchase, near the Maine border in Coos County.

Wild River Shelters



Blue Brook Shelter (1959)



Perkins Notch Shelter (1957)



Spruce Brook Shelter (1964)

Methodology

- Defining “Shelter”: Hiking shelters intended for overnight use and designed to be unenclosed with no door or other entranceway barrier.



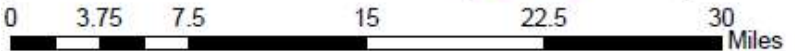
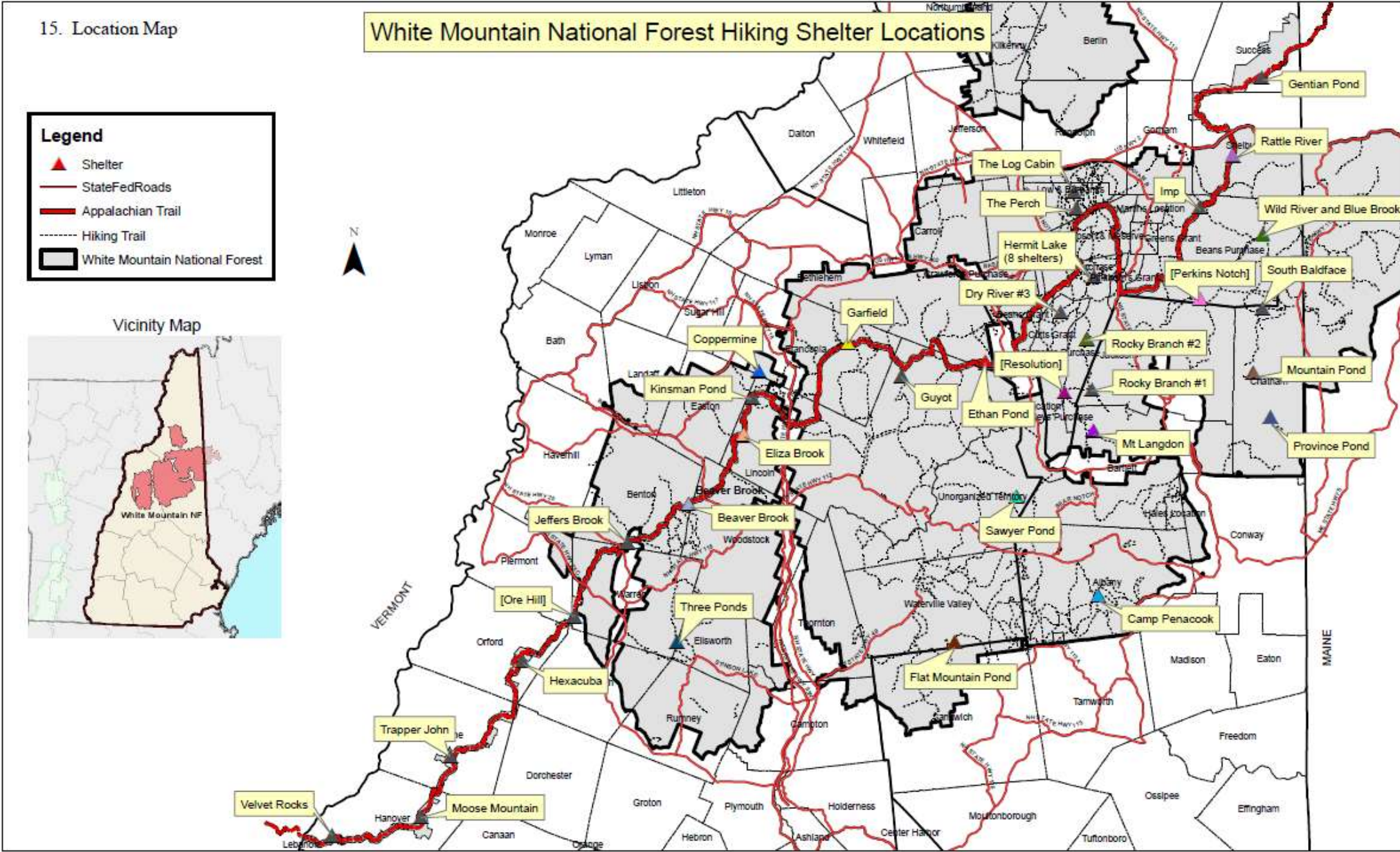
15. Location Map

White Mountain National Forest Hiking Shelter Locations

Legend

- ▲ Shelter
- StateFedRoads
- Appalachian Trail
- - - Hiking Trail
- ▭ White Mountain National Forest

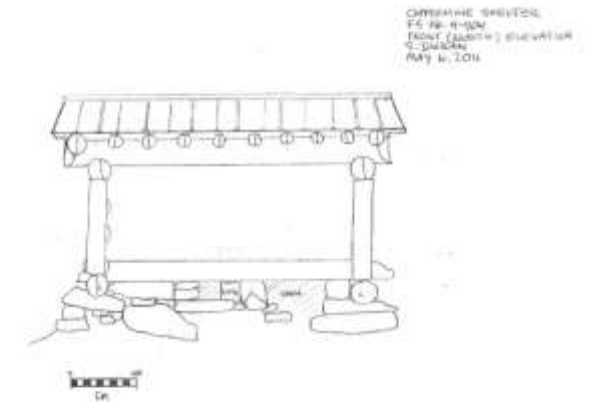
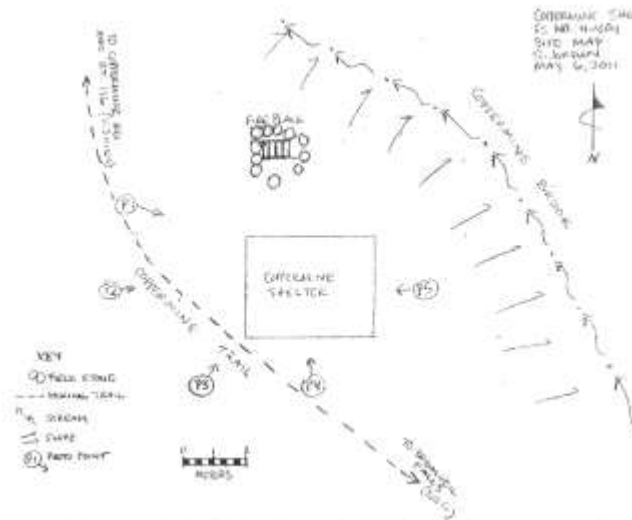
Vicinity Map



Note: Map created April 2014, showing shelters in existence at initiation of study in 2010. Those in [brackets] were removed or destroyed in the period from 2010-2014.

Methodology

- Develop historical context for shelter system
- Historical background for each of the existing 41 shelters (nonextant shelters referenced as examples of historic styles)
- Visit all shelters approaching 50 years old
 - Document with photos, measured drawings, detailed description
- Newer shelters: one shelter of each type visited and documented.
- Preparation of NHDHR Historic District Area Form to assess the historic significance of the shelter system, define which shelters contribute to significance, define boundary.

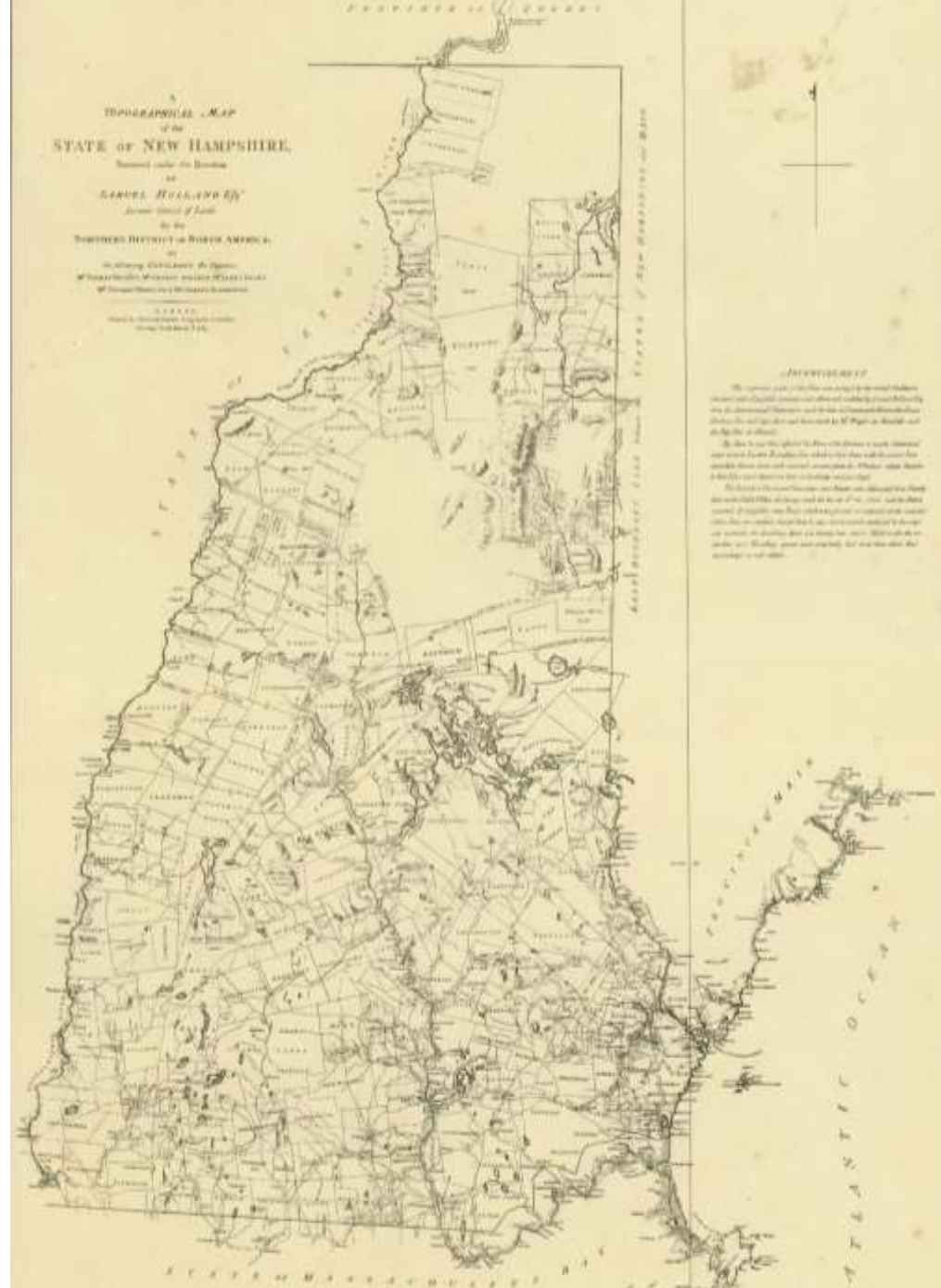




Historic Context



Historical White Mountain “Wilderness”



Topographical Map of the State of New Hampshire by Samuel Holland, 1784.

“A temporary hut...”

In travelling through New-Hampshire, there are now few places so remote from public houses, or hospitable inhabitants, as to oblige the traveller to lodge in the woods; but when this happens, either by necessity or choice, a temporary hut may be constructed, in an hour, by a person furnished with an axe.

-Jeremy Belknap, 1792



A LODGE IN THE WILDERNESS.

White Mountain Tourism



Logging

Large scale railroad logging operations left clearcut slopes, sparked massive forest fires.



Conservation Movement (1850-1920)

- Rise of hiking and camping as recreational activities, and establishment of outdoor clubs to sustain them.
- Establishment of US Forest Service (1905) and National Park Service (1916).
- Passage of the Weeks Act in 1911 and establishment of the White Mountain National Forest in 1918.



"Forestry Pioneers" on Mt Carrigain, 1919.

Outdoor Clubs in the White Mountains

Local groups formed with common themes of promoting the enjoyment of hiking and wilderness, building new hiking trails, and restoring trails damaged by logging operations.

- Appalachian Mountain Club (AMC), 1876
- Wonalancet Out Door Club (WODC), 1892
- Dartmouth Outing Club (DOC), 1909
- Randolph Mountain Club (RMC), 1910



Trail Building

"It is suggested that permanent camps be established by members of the Club at such points of interest in its work as Mount Adams or the East Branch of the Pemigewasset. Such camps will serve as centers for the working parties and may be built so as to last several years. A bark camp, well constructed, would do service, with a few repairs, more than one summer; but a log and board camp much more permanent can be made at a trifling cost."

-Charles Lowe of the AMC, 1876



AN IMPROVISED SHELTER

"A System of Shelters"

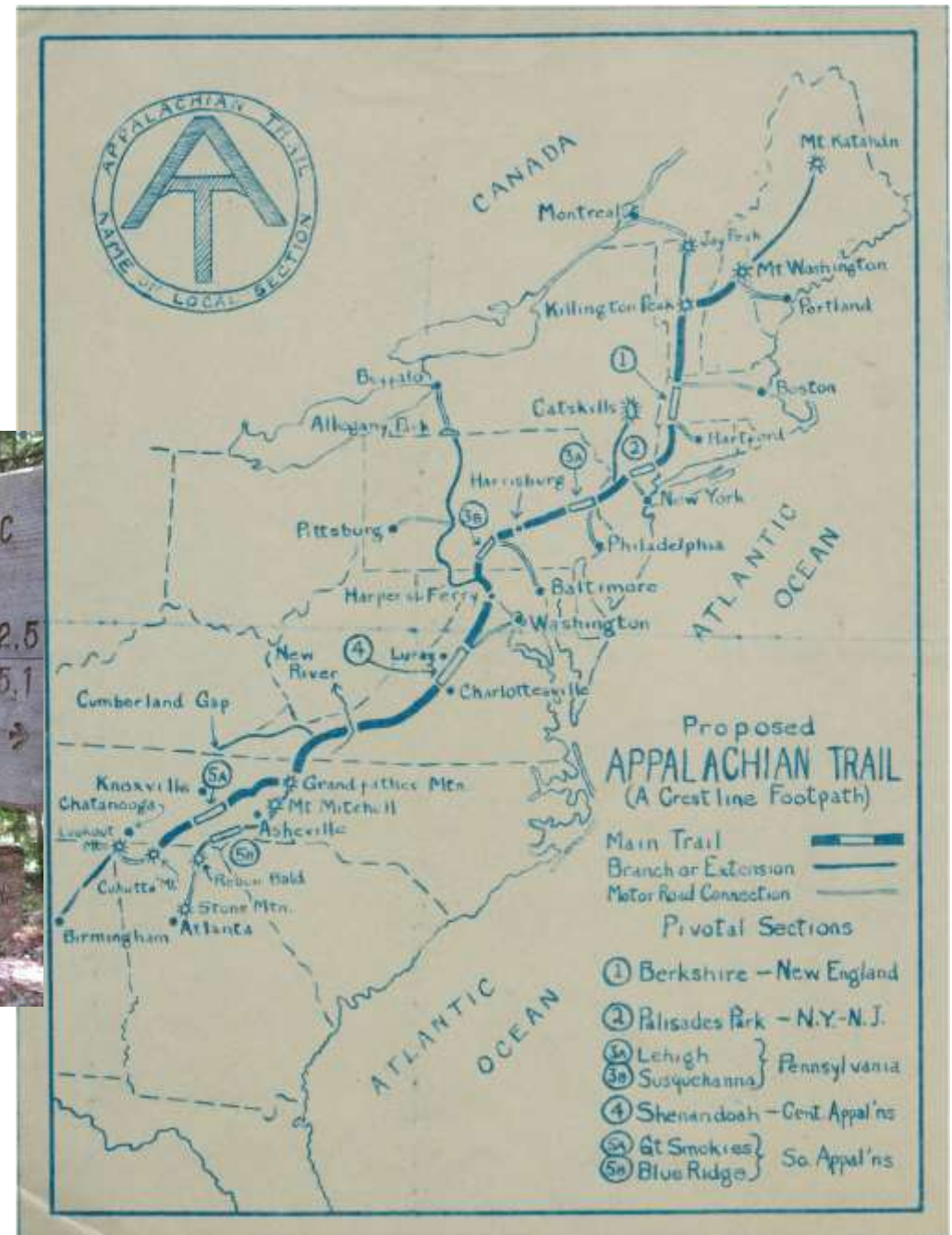
"...for a necessary corollary of the trail system itself is a system of shelters where those using the trails may escape from wind, rain, darkness, and fatigue. And so, located in strategic spots, by unfailing water springs, we have now fifteen open shelters, which, taken with the huts and camps... make it impossible for a tramper anywhere on our trail system ever to be beyond reasonable walking distance from a comfortable place to spend the night or escape from stormy weather. "

-Karl Harrington of the AMC, 1926



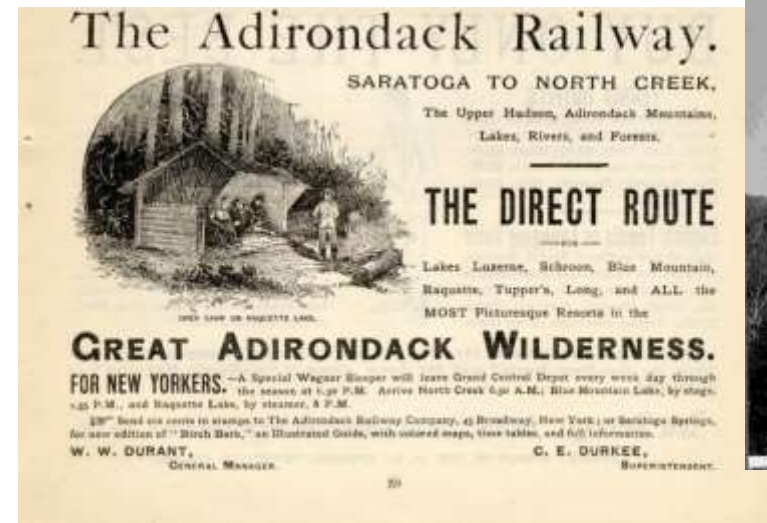
Appalachian Trail

- Appalachian Trail, proposed in 1921, incorporated and emulated AMC trail and shelter systems



“Adirondack Rustic” Architecture (c.1875-1930)

- Shelter design became more formalized in the 1890s
- “Adirondack” lean-to: part of larger architectural style developed in the Adirondack Mountains
- Emphasis on native materials to blend into woodland setting
- Style adopted by architects designing recreational structures in National Parks and Forests in 1920s, and Public Works Programs of 1930s



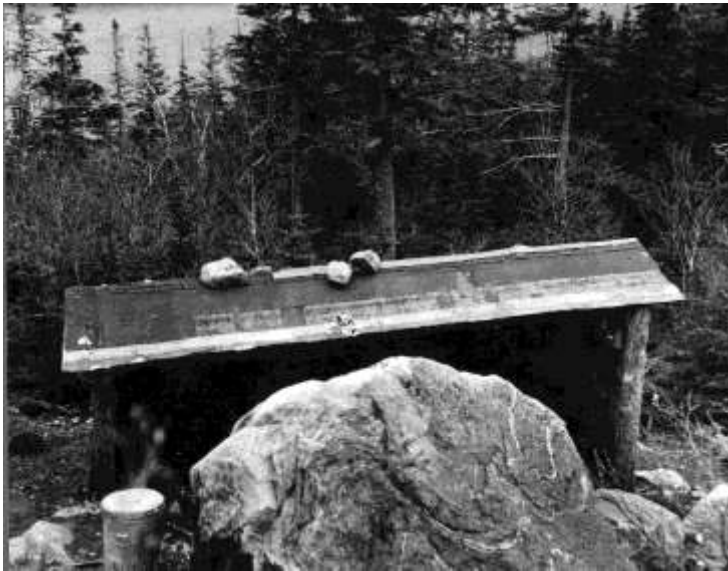
Shelter Locations

- For trail crew use
- Logging camp reuse
- Refuges
- Scenic destinations
- Fill in gaps to complete the “long line of camps and shelters across the White Mountains.” (Harrington, 1924)



Shelter Setting

- Early shelters (pre 1930s) were often built facing a cliff or large boulder for protection and to reflect heat.
- Early shelters often placed immediately adjacent to the trail.



Shelter Management

- Constant maintenance, replacement, shifting of location
- Difficulty of maintaining aging structures in remote locations
- Overcrowding, sanitation, and resource damage issues
 - “Campsite Betterment Plan”: Major renovations to shelter system in the early 1970s
 - Carry in-carry out program
 - Shelter removals / tent platforms
 - Caretakers
 - Restricted areas
 - Composting toilets
- AT “shelter creep”: too many, too big, not rustic enough





The Shelters



White Mountain Shelters

Style	Extant Shelters	Date
Birch Bark	NONE	c.1900
Log Shed	NONE	1910s
Small-Log Saltbox	NONE	1920s
FS Vertical and Horizontal Log	Mountain Pond Wild River Province Pond	1922 1922 1934
USFS Plan for Forest Camp Adirondack Shelter-1935	Coppermine Mt. Langdon	1935 1936
“Plans for Appalachian Trail Lean-to” – 1939	Perkins Notch	1957 (removed 2011)
Gabled	NONE	c.1940
DOC Large Overhang	NONE	c.1930-1970
WMNF Adirondack Shelter-1958	Camp Penacock Sawyer Pond Dry River #3 Flat Mtn Pond	1957 1958 1963 1964
AMC Vertical Pole	Ethan Pond	1957
“24 Ft Adirondack Shelter, 8-Man”-1965 (FS Drawing No. 7300-60050)	Hermit Lake 1 Hermit Lake 2 Hermit Lake 3 Hermit Lake 4 Three Ponds Hermit Lake 5 Rocky Branch #2 Rocky Branch #1	1965-1967 1965-1967 1965-1967 1965-1967 c.1966 1967 c.1967 (removed 2015) 1974
USFS 16’ Appalachian Trail	Rattle River Trapper John	1963 1973
USFS “Adirondack Shelter, Five Man” (FS Drawing No 7300-60059)	South Baldface	1967
USFS “Adirondack Shelter, 10-12 Man” (FS Drawing No. 7300-60131)	Hermit Lake 6 Hermit Lake 7 Hermit Lake 8	1967 1968-1969 1968-1969
Mahoosuc	Gentian Pond Guyot Imp Log Cabin Kinsman Pond	1974 1977 1980 1985 2007
DOC Modified Appalachian Trail Lean-to	Beaver Brook Ore Hill Moose Mountain	1993 2001 (burned 2011) 2004
Unique Design	Resolution The Perch Blue Brook Jeffers Brook Hexacuba Velvet Rocks Eliza Brook Garfield Ridge	1932 (removed 2011) 1948 1959 (relocated 2009) 1981 1989 2007 2010 2011

Shelter Types

- Birch Bark, c.1900
 - First shelters intended for recurring use
 - Shed lean-to covered with sheets of birch bark
 - Required frequent maintenance and repair
 - None remaining



Shelter Types

- Log Shed, c. 1910-1920
 - Unpeeled horizontal logs, notched back corners
 - Low shed roof line
 - Little to no foundation
 - None remaining



Shelter Types

- Small Log Saltbox, c.1920s
 - small diameter logs reflecting young age of forest
 - Notched on all four corners with partially enclosed front
 - Stacked stone foundation
 - Asymmetrical "saltbox" roofline
 - None remaining

"...the most economical and durable type construction discovered up to date...is peeled logs laid notch downwards, and a bark roof." -Karl Harrington of AMC, 1924



Shelter Types

- Forest Service Vertical and Horizontal Log
 - First shelters built by the USFS (1920-1934)
 - Earliest style with extant shelters
 - Wild River (1922), Mountain Pond (1922), Province Pond (1934)
 - Vertical log walls
 - Saltbox roofline

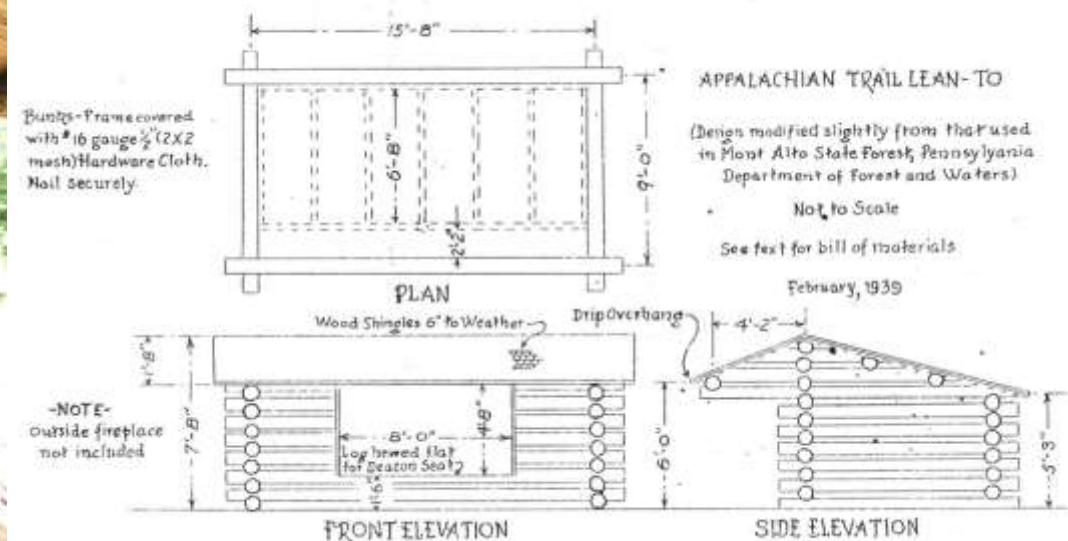


Shelter Types

- “Plans for Appalachian Trail Lean-to” – 1939
 - Plan issued first in 1939 by the Appalachian Trail Conference, reissued multiple times through the 1950s
 - Although built in 1957 and not on the Appalachian Trail, Perkins Notch was the only White Mountain shelter known to be of this style



- Wire mesh bunks in plan (though Perkins Notch had floor boards) and trough to trap porcupines inside opening.



Shelter Types

- Gabled, c.1940
 - Open cabin style used by AMC around 1940
 - None remain



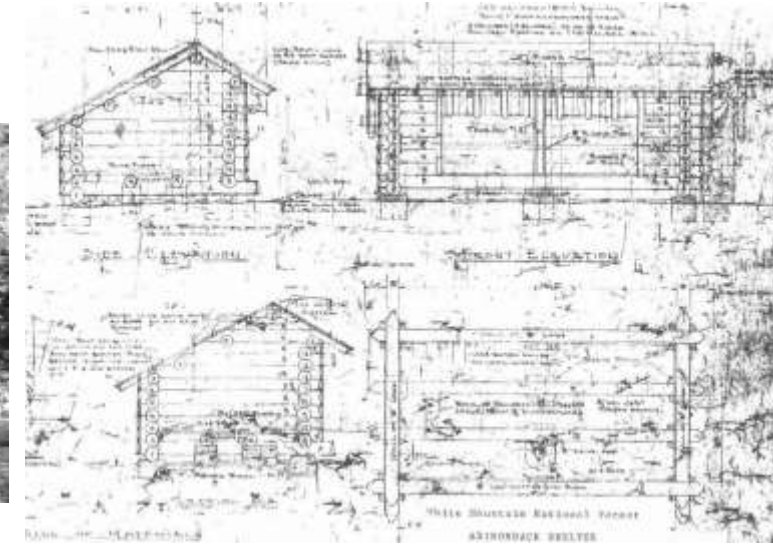
Shelter Types

- Dartmouth Outing Club-Large Overhang
 - Eleven shelters were built by the Dartmouth Outing Club (DOC) in the 1930s, nine between 1955-1980.
 - Large front overhang to facilitate snowdrifts at the opening of the shelter for winter camping
 - None remain



Shelter Types

- WMNF Adirondack Shelter- 1958
 - horizontal logs, saddle-notched at all four corners, a partially enclosed front and a salt-box style roof with slight overhang in front.
- Four existing shelters in this style:
 - Camp Penacook-1957
 - Sawyer Pond-1958
 - Dry River No. 3-1963
 - Flat Mountain Pond-1964



Shelter Types

- AMC Vertical Pole
 - “a new concept in construction, differing from the regular A.M.C. pattern. Vertically stockaded, peeled spruce logs form the side-walls; it has the usual open front, and is salt-box in shape” (Maker 1957: 537-8.)
 - Three shelters known to have been built in this style: Ethan Pond (1957), Great Gulf (1959), Eliza Brook (1963).
 - Ethan Pond is last one standing.



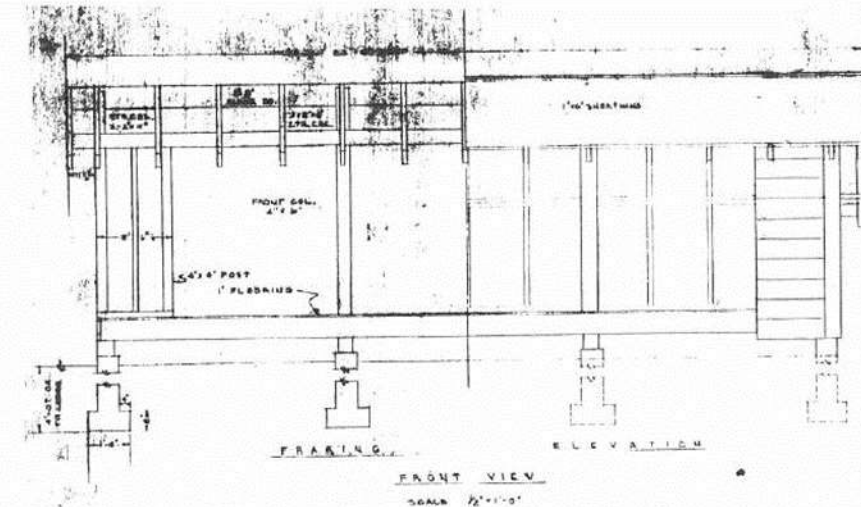
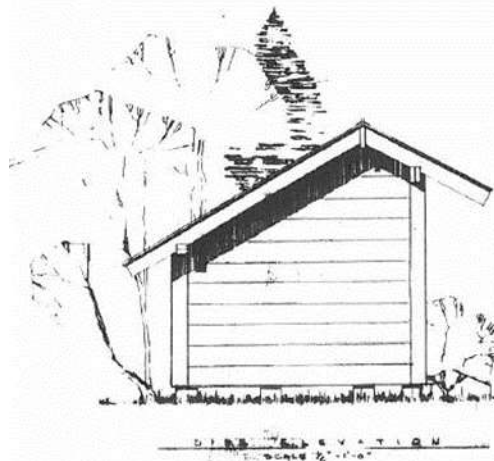
“Operation Outdoors”

- By the late 1950s and 1960s, the Forest Service was aggressively building new recreation facilities, and anticipating increased use.
- Operation Outdoors was a USFS initiative to modernize facilities
- USFS developed several standard shelter designs, which used dimensional lumber that could be prefabricated and airlifted to the site
- AMC shelters followed USFS designs



Shelter Types

- “24 Ft Adirondack Shelter, 8-Man”-1965
 - USFS planFrame shelter, dimensional lumber
 - Three bay, saltbox shape
 - Some straight edged siding, some live-edge
 - Hermit Lake 1-5 (1965-1967), Three Ponds (1966), Rocky Branch 2 (1967), Rocky Branch 1 (1974)



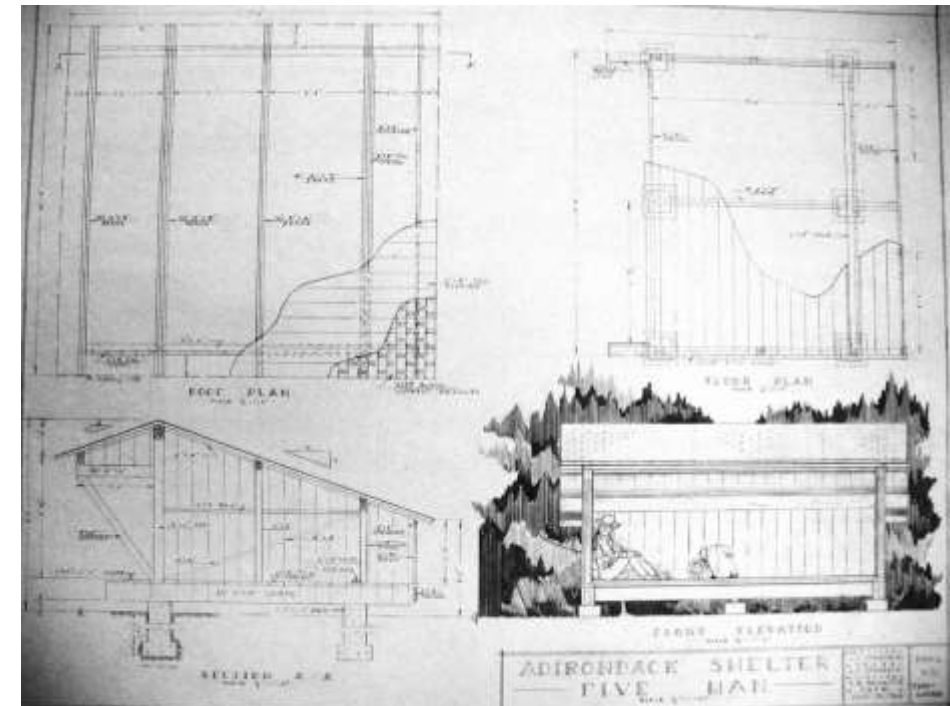
Shelter Types

- **USFS 16' Appalachian Trail**
 - Shorter 2-bay version
 - Common on AT on southern National Forests, also examples in Maine and Vermont.
 - Rattle River (1963) and Trapper John (1973)



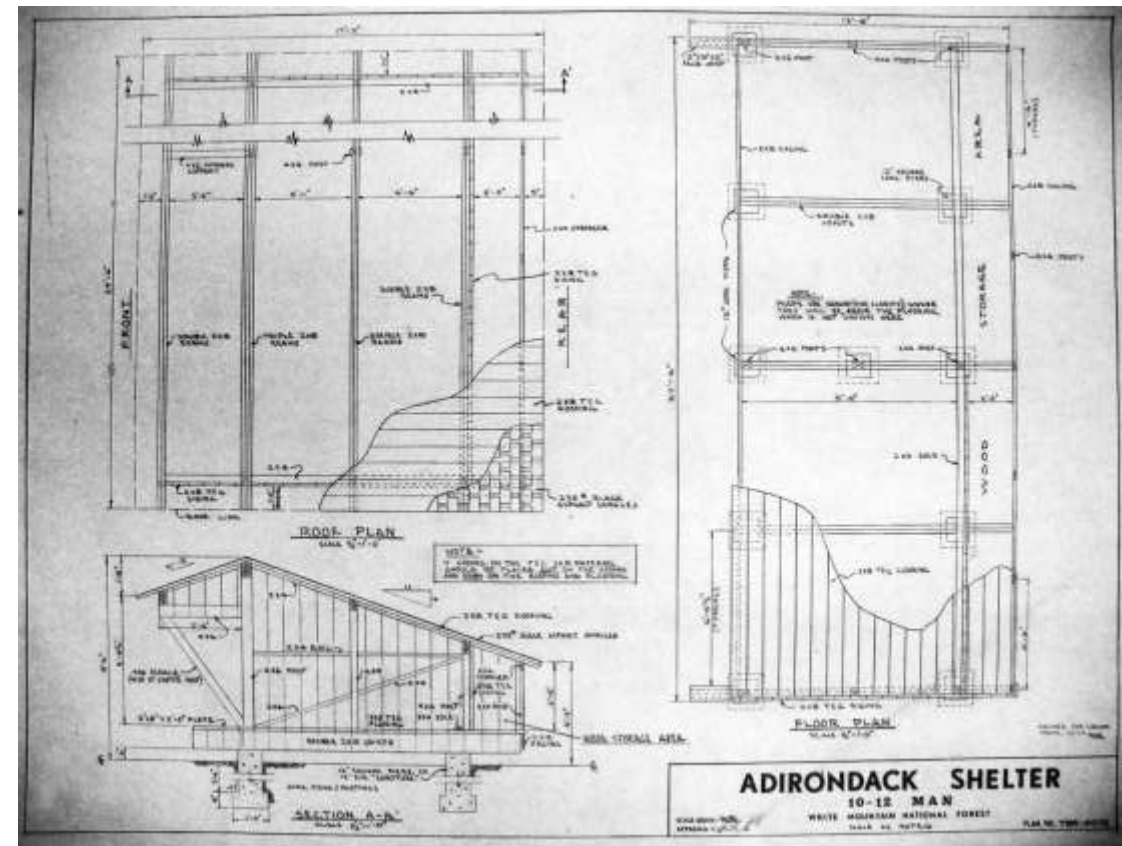
Shelter Types

- **USFS “Adirondack Shelter, Five Man”**
 - Large roof overhang in front, and vertical tongue and groove siding.
 - Firewood storage area under the roof along the back of the shelter
 - With the removal of Spruce Brook (1964) from the Wild River Wilderness in 2009, South Baldface (1966) is the only remaining shelter of this style.



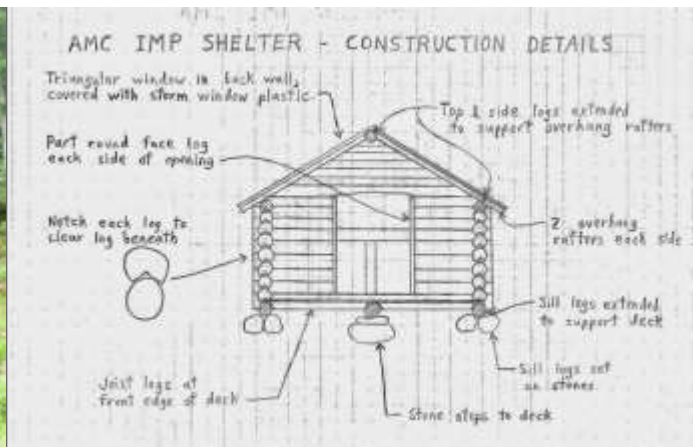
Shelter Types

- **USFS “Adirondack Shelter, 10-12 Man”**
 - Larger version of Five Man
 - Hermit Lake shelters 6, 7, 8, built 1967-1969.
 - Sliding doors added later to keep out snow.



Shelter Types

- “Mahoosuc”
 - AMC began to use open log cabin style shelters on the AT in the Mahoosuc Range in Maine, late 1970s-1980s
 - Return to native materials for comparative longevity and lower cost
 - Gentian Pond (1974), Guyot (1977), Imp (1980), RMC’s Log Cabin (1985), Kinsman Pond (2007)



Shelter Types

- **DOC Modified Appalachian Trail Lean-to**
 - Variation on the original “Plans for Appalachian Trail Lean-to – 1939” style without notched corners.
 - Beaver Brook (1993), Ore Hill (2001-2011), Moose Mountain (2004)



Shelter Types

- **Unique Designs**
 - Resolution (1932)
 - The Perch (1948)
 - Blue Brook (1959, moved 2009)
 - Jeffers Brook (1981)
 - Hexacuba (1989)
 - Velvet Rocks (2007)
 - Eliza Brook (2010)
 - Garfield Ridge (2011)





Conclusion



Conclusion

- The White Mountain National Forest Hiking Shelter System was determined eligible for listing in the National Register of Historic Places for its significance to the development of outdoor recreation in New Hampshire and the United States as a rare and early example of a hiking shelter network, and as examples of the evolution of the Adirondack Rustic style
- 22 of the 41 shelters are considered contributing to the system's historic significance, and 19 are non-contributing, mostly because they are not yet 50 years old.
- The boundary of the district was defined as a 20 meter radius around each contributing shelter.
- Evaluations and decisions concerning individual shelters can be made with full consideration and understanding of the shelter system as a whole and its historic significance.

Shelter Facts

- Standing in 2010, when study began: 41
- Standing in 2015: 37
- More than 50 years old: 19
- Less than 10 years old: 4
- Replaced between 2010 and 2015: 2
- Maintained between 2010 and 2015: 7
- Last shelters added to system: 1981 (2001)
- Original shelter in original location: 10
- Styles with only one remaining example: 2

