A PRESERVATION GUIDE FOR PARK STRUCTURES BUILT BY THE CIVILIAN CONSERVATION CORPS IN THE PACIFIC NORTHWEST

by

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A THESIS

Presented to the Interdisciplinary Studies Program:
Historic Preservation
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Master of Science

March 2007

"A Preservation Guide for Park Structures Built by the Civilian Conservation Corps in the Pacific Northwest," a thesis prepared by Sueann Brown in partial fulfillment of the requirements for the Master of Science degree in the Interdisciplinary Studies Program: Historic Preservation. This thesis has been approved and accepted by:

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An Abstract of the Thesis of

Sueann Brown for the degree of Master of Science

in the Interdisciplinary Studies Program: Historic Preservation

to be taken March 2007

Title: A PRESERVATION GUIDE FOR PARK STRUCTURES BUILT BY THE CIVILIAN CONSERVATION CORPS IN THE PACIFIC NORTHWEST

Approved: [redacted]

Donald Peting

The Civilian Conservation Corps (CCC) was established in 1933 by President Franklin D. Roosevelt to provide work for young men who were unemployed due to the Depression and to create a work force for the purpose of conserving natural resources. Part of this initiative was the development of state parks nationwide under the direction of the National Park Service. This thesis addresses the preservation needs of park structures built by the CCC in the Pacific Northwest. It provides a brief overview of the historical context of the CCC labor force that built the structures and the National Park Service Rustic design principles that guided their work. This context demonstrates the cultural resource value of these structures and serves as a basis for the primary focus of this thesis, a Preservation Guide for CCC structures. Structures in Oregon and Washington State Parks provide examples of preservation challenges and recommended treatments.

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ACKNOWLEDGMENTS

I would like to thank the State Park Systems of the Pacific Northwest, especially Nancy, Shirley and Cal at Oregon State Parks, for access to their parks and their records and for keeping the CCC legacy alive. Thanks to Sara, Jim, Raena and, especially, Sarah for their camaraderie and support. Special thanks to my thesis committee, Don Peting, Fred Walters and John Platz for their expert advice, guidance and patience; with added deepest gratitude to Don whose passion for preservation inspired me to follow my own and whose continuing guidance is making that pursuit a success.

To my Mom

for teaching me to dream

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CHAPTER I

INTRODUCTION

The CCC was established in 1933 by President Franklin D. Roosevelt to serve the dual purpose of providing work for young men who were unemployed due to the Depression and to create a work force for the purpose of conserving our nation's natural resources. One of the major contributions of the CCC was the development of hundreds of state parks nationwide, under the direction of the National Park Service.

While the vast majority of CCC workers were initially unskilled laborers, the landscapes they developed and structures they built have a distinctive, recognizable character. This is due in part to the guidance given by National Park Service (NPS) designers. NPS developed guide books explaining design principles to be followed in park design and NPS staff reviewed master plans and structure designs to ensure that these principles were followed by local park designers. These design principles were the foundation for what came to be known as the National Park Service Rustic Style. This style had been evolving since the creation of the National Park Service in 1916, but with the influx of workers from the CCC reached its peak in production in the years 1933-1942.

While structures with a rustic character had been a part of both vernacular building and other architectural styles such as the Adirondack and Arts and Crafts styles, the

National Park Service Rustic style was a distinct style created specifically for parks. The style developed as a means of providing infrastructure to serve the needs of park visitors while minimizing the impact of that infrastructure on the land the visitors were coming to enjoy.

The Rustic Style emphasized the use of locally available materials such as stone from local quarries and log from trees on or near the site being developed. Buildings, road ways and small scale features such as signs and water fountains were all designed to harmonize with the local landscape. In the seventy years since the CCC developed these parks, many structures have begun to harmonize a bit too much with the local landscape, taking on too many attributes of the damp mossy forests surrounding them and falling into disrepair or disappearing entirely.

This thesis addresses preservation needs of these structures. It provides a brief overview of the historical context of the Civilian Conservation Corps labor force that built these parks and the National Park Service design principles that guided their work. This context demonstrates the value of these structures both historically and aesthetically and serves as a basis for the primary purpose of this thesis, a guide for the preservation of park structures built by the CCC in the Pacific Northwest.

The character of parks developed by the CCC reflects the guidance received in the initial construction of the parks, but current park stewards do not have similar guidance for preservation and restoration. The goal of this thesis is to fill that void by demonstrating that the legacy of the CCC is worthy of preservation and providing guidance for carrying out that preservation.

CHAPTER II

EVOLUTION OF THE NATIONAL PARK SERVICE RUSTIC STYLE

The National Park Service (NPS) was established in 1916 to manage the lands that had been set aside as national parks. The purpose clause in the legislation creating the Park Service established what has come to be known as the "dual mandate" to "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations."[1] One of the challenges in meeting this mandate was the development of infrastructure that would serve the needs of visitors without visually detracting from or competing with the scenery the visitors came to enjoy. The National Park Service Rustic Style of architecture evolved as a means of achieving these somewhat conflicting goals.

By the mid nineteenth century, there was a growing movement in the United States to preserve natural spaces as park land. In the east, the focus was on establishing urban parks that served as oases of tranquility in the increasingly industrialized and crowded cities. In the west, the focus was on the preservation of areas of outstanding natural beauty. Prior to the creation of the National Park Service, a number of sites had

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[1] Alfred Runte, *National Parks: The American Experience* (Lincoln: University of Nebraska Press, 1984), 104.

been set aside as national parks. The first wilderness parks established were Yosemite, which was initially deeded to the State of California in 1864, and Yellowstone, which became the first national park in 1872. [2]

Frederick Law Olmstead was one of the first Commissioners appointed to manage the Yosemite grant. In 1865 he wrote a report for the California legislature containing recommendations for managing Yosemite that could easily be applied to other parks. In it he stated that "The first point to he kept in mind then is the preservation and maintenance as exactly as is possible of the natural scenery; the restriction, that is to say, within the narrowest limits consistent with the necessary accommodation of visitors, of all artificial constructions an the prevention of all constructions markedly inharmonious with the scenery or which would unnecessarily obscure, distort or detract from the dignity of the scenery."[3] Unfortunately, the recommendations were not followed for many years after they were written.

By the time the National Park Service was established there were seventeen national parks and twenty-two national monuments being administered by the Department of the Interior. Administration of park lands was haphazard in the early years, with no unified approach to development within the parks. Structures had been built by various parties including the US Army, the state of California, railroads and

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[2] William Tweed, Laura E. Soulleire, and Henry G. Law, *National Park Service Rustic Architecture: 1916 - 1942* (San Francisco: National Park Service, 1977), 1.

[3]Frederick Law Olmstead, "Yosemite and the Mariposa Grove: A Preliminary Report, 1865," (1865).

concessionaires and by private organizations, such as the Sierra Club's LeConte Lodge at Yosemite.[4]

The first attempt at comprehensive planning and design for the national parks came in 1914 when Mark Daniels, a San Francisco landscape architect, was hired by the Interior Department to develop a comprehensive plan for the Yosemite Valley. Daniels was a graduate of the University of California at Berkeley who studied landscape architecture and city planning at Harvard. Two months after being hired for the Yosemite plan, he was named "General Superintendent and Landscape Engineer" for the national parks. Daniels stayed with the parks for only two years, but during that time created plans for Yosemite, Sequoia, Glacier, Mount Rainier and Crater Lake. Perhaps more importantly, he served as an advocate for the need for planning and design review in the parks. He resigned in 1915, citing the responsibilities of his dual title as being too much for one person.[5] Stephen Mather used Daniels studies to support his lobbying for the creation of a separate bureau to oversee the national parks. When the National Park Service was created in 1916, Mather was named as the first director.

In 1918 a Statement of Policy for the administration of the National Park Service was issued by Secretary of the Interior Franklin Lane that established the criteria and methods for park design and planning. The policy stated:

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[4] Linda F. McClelland, *Building the National Parks: Historic Landscape Design and Construction* (Baltimore: The Johns Hopkins University Press, 1998), 124.

[5] Ethan Carr, *Wilderness by Design: Landscape Architecture and the National Park Service* (Lincoln: University of Nebraska Press, 1999), 72-73.

> In the construction of roads, trails, buildings and other improvements, particular attention must be devoted always to the harmonizing of these improvements with the landscape. This is a most important item in our program of development and requires the employment of trained engineers who either possess a knowledge of landscape architecture or have a proper appreciation of the aesthetic value of park lands. All improvements will be carried out in accordance with a preconceived plan developed in special reference to the landscape, and comprehensive plans for future development of the national parks on an adequate scale will be prepared as funds are available for this purpose.[6]

In a step toward carrying out this policy, that year Park Service Director Stephen Mather hired Harvard educated landscape architect Charles Punchard as the first NPS Landscape Engineer. In Punchard's first year he visited seven national parks and four monuments including spending two and a half months in Yellowstone and seven in Yosemite analyzing the existing conditions and developing plans for improvements.[7]

Although trained as a landscape architect, Punchard began what was to become the NPS standard practice of having "Landscape Engineers" design structures and review architectural plans for all buildings built in the parks. This included both those constructed by or for the park service and those constructed by the concessionaires who owned and operated hotels and other service facilities in the parks. Punchard described the role of the Landscape Engineer as being "a small fine arts commission in himself, for all plans of the concessioners must be submitted to him for approval as to architecture and location before they can be constructed, and he is responsible for the design of all

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[6] Report to the Director of the National Park Service (Washington DC, Government Printing Office, 1918), 274. in Tweed, Soulleire, and Law.

[7] McClelland,136.

structures of the Service, the location of roads and other structures on the ground which will influence the appearance of the parks..."[8]

Daniel Hull was hired as Assistant Landscape Engineer in 1920, and was promoted to replace Punchard when Punchard died of tuberculosis later that year. Like Punchard, Hull was Harvard educated, having earned his masters degree in landscape architecture there in 1914. The position of Assistant Landscape Engineer was filled by Paul Kiessig. The headquarters for the landscape program was established at Yosemite in the fall of 1920 shortly before Punchard's death.

The first NPS landscape engineers, Daniels, Punchard and Hull were all Harvard educated. Their work was clearly influenced by Harvard Professor Henry Hubbard. Hubbard and Theodora Kimball wrote *An Introduction to the Study of Landscape Design*, first published in 1917. The book was considered to be one of the most influential books on landscape architecture in the early twentieth century, not because it represented a new design philosophy but because it was the first book to summarize the theories of landscape design from a range of historic and contemporary sources. Hubbard was the founding editor of Landscape Architecture magazine and later became a partner at Olmstead Brothers.[9]

Hubbard's book translated the concepts of A. J. Downing and F. L. Olmstead Sr. into practical approaches for contemporary landscape designers. He advocated use of

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[8] Ibid.,137.

[9] Carr,102.

native materials, including stone that had already been exposed to the weather and recommended that mosses and lichen be allowed to continue to grow on stone surfaces to allow structures to harmonize with the existing landscape. Many of the concepts he described became standard principles in NPS design.[10]

Hubbard was an early advocate for the creation of the National Park Service and he wrote frequent articles on park planning and design. His articles discussed the challenges of keeping parks in their as natural a state as possible while developing facilities for public use. He wrote "It is an art dealing in grandeur but still an art in the utmost humbleness, restricting man's self-assertion within the smallest limits".[11]

Although Harvard educated, the early Landscape Engineers were based in California and were influenced by the contemporary architectural movements in the area. The Arts and Crafts movement, with its emphasis on the use of natural materials and integration of interior and exterior space, was popular nationwide but distinct variations were developing in California.

In San Francisco a number of architects, notably Bernard Maybeck, were developing the Bay Area tradition of architecture. Maybeck's buildings often had a vertical emphasis that mimicked their Berkeley hillside sites. The LeConte Lodge, built in Yosemite in 1903 was designed in this style by Maybeck associate John White. In Southern California, brothers Henry and Charles Greene were combining the concepts of

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[10] McClelland,79-81.

[11] Henry V. Hubbard, "Landscape Development Based on Conservation as Practiced in the National Park Service," *Landscape Architecture* 29, no. 3 (1939): 104.

the Arts and Crafts movement with concepts from Japanese building traditions. Their designs tended to have a horizontal emphasis with low pitched roofs with wide overhangs. Their use of battered rubble stonework to seamlessly connect buildings with the earth was a concept often repeated in NPS designs.

Daniel Hull continued the role established by Charles Punchard, reviewing plans of concessionaires and designing structures built by the park service. This role allowed Hull to both influence and be influenced by designers hired by concessionaires. Among Hulls earliest projects was the design of structures in the newly established Grand Canyon National Park. The Sante Fe Railroad and its concessionaire the Fred Harvey Company had already constructed a number of buildings at Grand Canyon, designed by architect Mary E.J. Colter, including Lookout Studio, shown in Figure 1.

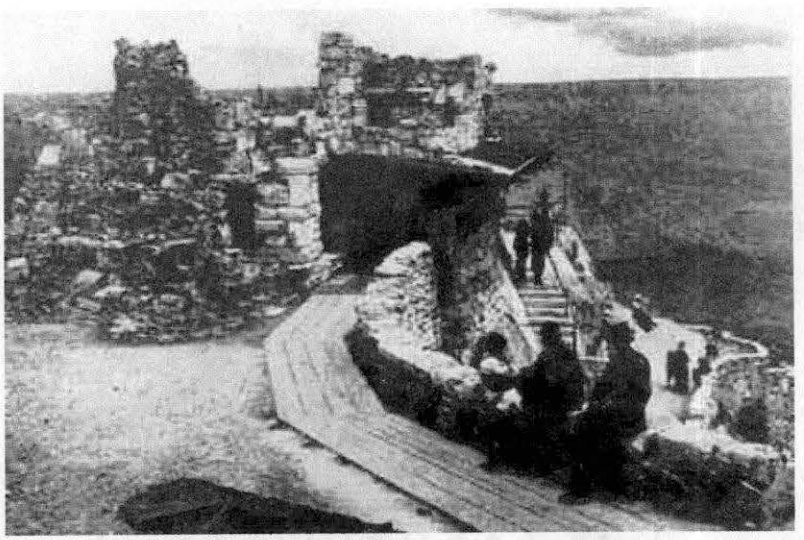

Figure 1. Lookout Studio at Grand Canyon, designed by Mary Coulter in 1914, photo, circa 1915, reprinted from Tweed, *National Park Service Rustic Architecture: 1916 - 1942.*

Colter's designs predated but were compatible with the NPS stated policy of harmonizing with the landscape. Her designs were influenced by her study of indigenous architecture of the Southwest. She used this inspiration to design masonry structures using irregularly set native stone to harmonize with the cliff top setting at the Grand Canyon. When Hull was called upon to design an administration building for the park in 1921 (Figure 2), his design was clearly influenced by her work.

Figure 2. Administration Building, Grand Canyon, Daniel Hull 1921 reprinted from Tweed.

In 1920-21 Hull designed a number of buildings for Yellowstone Park, including community buildings for campgrounds and entrance stations, built with log and stone construction. Yellowstone also offered another opportunity for Hull to study one of the first rustic style buildings built in the parks, the Old Faithful Inn designed by Robert Reamer for the Northern Pacific Railroad in 1903. The building was designed in the

Adirondack style and featured log, wood shingle and native stone. Gnarled twisted logs were used for both exterior and interior decorative detailing.[12]

Hulls 1923 design for the Lake Ranger Station at Yellowstone featured log construction and was designed to harmonize with not only the surrounding landscape, but also to harmonize in a cultural sense. The building was finished in a trapper cabin style, with the log ends chopped rather than sawn, in order to reflect the historical building traditions of the region. This detail was said to have been specifically requested by NPS Director Stephen Mather.[13] Mary Colter had incorporated regional culture in her designs, but the Lake Ranger Station was the first conscious effort of the NPS to do the same. It was a concept that became the standard throughout the park system.

In 1923, Gilbert Stanley Underwood, another recent Harvard architecture graduate, was hired by the Union Pacific Railroad to design a lodge for Zion National Park. Underwood designed a large hotel for the site, but Stephen Mather demanded the project be redesigned with a smaller central pavilion surrounded by cottages. Hull and Underwood developed a good working relationship while working on that project, and Hull requested and received permission to move the landscape division to Underwood's Los Angles office that year.

Ironically, while the Landscape Design office was based in Yosemite, most of their attention was directed toward other parks. Planning for the new Yosemite Village

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[12] McClelland,111.

[13] Tweed, Soulleire, and Law,35.

had been Mark Daniels first assignment, but with the exception of the 1920 Ranger Club construction on the administrative center of the new village did not get underway until 1923, the year the design office moved to Los Angeles.

Yosemite Village provides an interesting example of the early evolution of the rustic style. The Ranger Club (Figure 3), built in 1920, features a steeply pitched roof, vertical log corners, log trim and a stone fireplace. The roof pitch gives the vertical emphasis that mimics the surrounding trees and cliffs. Designed at a time when a conscious effort was being made to promote tourism to the national parks as an alternative to traveling to Europe, the steep roof and gingerbread trim on the porch railings give the structure a somewhat Swiss appearance. The design of the Ranger Club was originally intended to establish a theme for the rest of the Village, but by the time the other buildings in the administrative center were built the design concepts had changed.

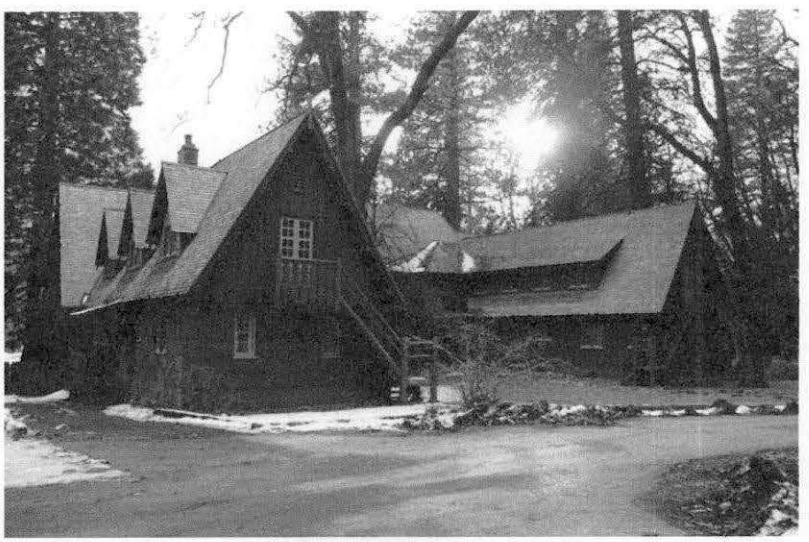

Figure 3. Ranger Club at Yosemite, built in 1920, designed by Charles Sumner.

The Landscape Design office completed the master plan for Yosemite Village, but the design for the buildings was contracted out. Los Angeles architect Myron Hunt designed the administration building, built in 1924, which featured a stone veneer lower level and a shingled upper story, trimmed with log with pioneer style workmanship. Herbert Maier was hired to design the museum, built in 1925. His design was intended to harmonize not only with the surrounding landscape, but also with other village structures, including the adjacent administration building.

The Museum building, shown in Figure 4, has a stone veneer first level and wood shingled second level, but the stone flares out more at the base to give it the appearance of having grown out of the earth. Both buildings had a horizontal emphasis, allowing them to blend more with the ground. As Herbert Maier described it "To attempt altitudinal impressiveness would have meant entering into competition with the cliffs, and for such a competition the architect has no stomach."[14]

[14] Herbert Maier, "The Purpose of the Museum in the National Parks," *Yosemite Nature Notes* 5, no. 5 (1926): 38. Also quoted in McClelland, 168.

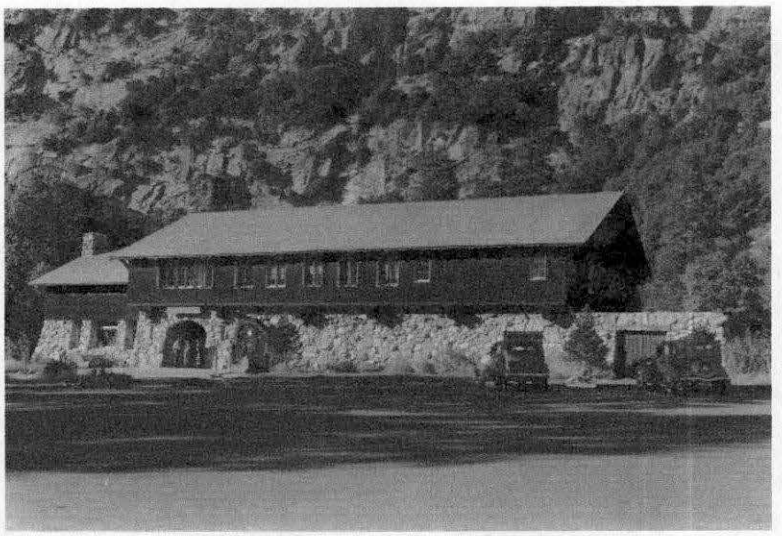

Figure 4. Yosemite Museum, designed by Herbert Maier in 1924, photo from Yosemite Research Library.

Daniel Hull influenced the design of both of these structures as part of his role in reviewing designs for all park structures. The increased use of stone and the horizontal emphasis of the later village structures reflect the influence of the work of Greene and Greene in southern California, where the landscape design office had relocated.

In 1925 Gilbert Stanley Underwood was contracted to begin design work for the Ahwahnee Hotel at Yosemite. The hotel was a large six story structure built with steel and concrete, but made to appear to be built with wood. Most of the exterior rafter tails and siding were actually concrete formed to look like wood. The only actual wood structural members were the log columns and exposed log roof trusses in the dining room. In 1927 Underwood designed a lodge for the Grand Canyon in which he used more

structural logs due to difficulty getting steel to the site. That building was destroyed by fire in 1932.[15]

In 1927, the Landscape division relocated to San Francisco in order to facilitate communication with other branches of the Park Service including the branches of Education and the Civil Engineering. Hull chose to resign and stay in Los Angles to continue his private practice. He was replaced by Thomas Vint, who had joined the landscape staff as a draftsman in 1922 and had been the assistant Landscape Engineer since 1923.[16] Vint had grown up in Los Angles and worked as a draftsman for Frank Lloyd Wright's son Lloyd Wright before enrolling in the landscape program at the University of California at Berkeley. After receiving his BS in Landscape Architecture in 1919, he returned to Los Angles and worked as a construction laborer, an architectural draftsman, a self employed landscape contractor and as a landscape designer for a commercial nursery. Vint began working for Hull at Yosemite in 1922, where he was immersed in the developing park service design ethic. He started as a draftsman, but continually expanded his responsibilities traveling to park job sites to monitor and design projects.[17]

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[15] Tweed, Soulleire, and Law,44.

[16] Ibid.,47.

[17] Carr,190.

Vint took over the landscape office just as available funding and a backlog of projects required a great expansion in what had for years been a two person office.[18] In selecting new hires, Vint understood that park service work was unique and assembled a staff with varied backgrounds. He described the work of the Landscape Division as being of "... a different character than the general practice of the landscape. Although landscape work predominates in the work, it merges into the field of architecture. ... The work has to do with the preservation of the native landscape and involves the location and construction of communities, buildings, etc. within an existing landscape."[19]

By 1929, Vint's staff had expanded to include six assistant landscape architects and two junior landscape architects. By this point, the basic principles of Park Service Rustic design were well established and Vint felt the best way for his new staff to learn these principles was on the job, the way he had learned them. Vint established a training process that involved having new hires work with Vint in the San Francisco office for a year before being assigned as a resident landscape architect in the field. Vint felt it took "at least a year to make national park men out of the best new men, as it is specialized work."[20]

Vint organized his staff into districts with a landscape architect assigned to each district. Preliminary plans were generally prepared by the field staff, with the architects in

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[18] Vints only assistant when he opened the San Francisco office was John Wosky, who became associated with NPS through his work as a draftsman for Gilbert Stanley Underwood. Wosky later became the resident landscape architect for Yosemite and designed a number of buildings for the park.

[19] McClelland,199.

[20] Carr,194.

the San Francisco office preparing final plans and specifications. In the late twenties and early thirties, increased budgets and staffing allowed for the construction of a great number of basic facilities such as administrative buildings, comfort stations, entrance stations and housing throughout the park system. All were built according to what had become the basic principles of Park Service Rustic design.

Herbert Maier continued to work for the American Association of Museums through the late 1920s and early 1930s designing educational facilities for the parks including museum buildings at the Grand Canyon and Yellowstone and a number of trailside interpretive shelters, including the Norris Geyser Basin Museum at Yellowstone, shown in Figure 5.

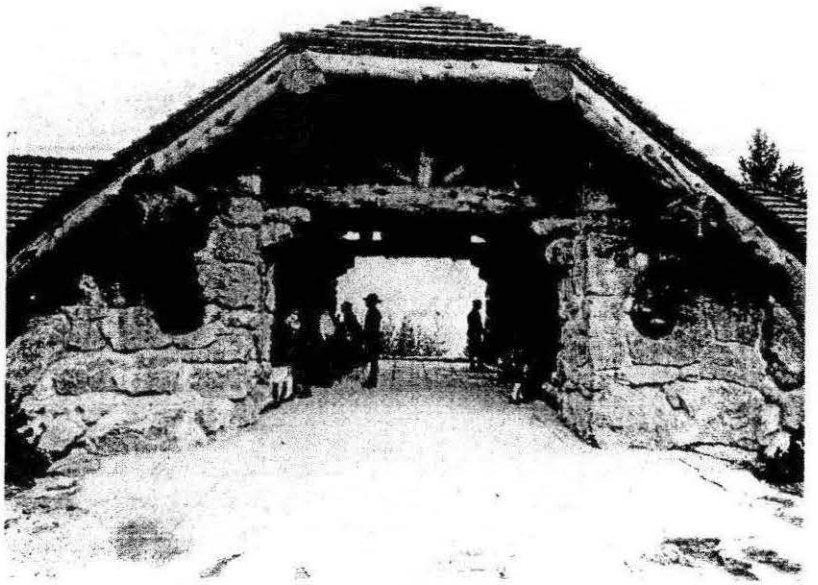

Figure 5. Norris Geyser Basin Museum, designed by Herbert Maier in 1929, reprinted from Herbert Maier *Inspectors Photographic Handbook*, National Park Service, ca.1934.

Each structure was constructed with log and stone, and Maier's designs had an increasing naturalistic appearance, with more dramatic battering of the stonework and

over sizing of log and stone elements in relation to the structure. These structures are among the best and most imitated structures in the Park Service Rustic style. In working closely with Vint, Maier both influenced and was influenced by the work of the Landscape Design Office.

With the increase in development activity in the parks, it became apparent that there was a need for long term planning. Vint and Merel Sager, who had been exposed to planning concepts during his training at Harvard, developed a system of six year plans, to be reviewed and revised annually. Each of the field Landscape Engineers was responsible for preparing plans for their assigned areas, which were reviewed and approved by the San Francisco office. By 1933, Vint's office had development plans in place for all parks running through fiscal year 1939.[21]

[21] Tweed, Soulleire, and Law,73-74.

CHAPTER III

THE ROLE OF THE CIVILIAN CONSERVATION CORPS IN STATE PARK DEVELOPMENT

Origins of the CCC

While the early 1930s were a time of growth for the National Park Service (NPS) Landscape Design Office, the rest of the country was in a deep economic depression. It has been estimated that among workers under age 24 in 1932, twenty five percent were unemployed. An additional twenty-nine percent were underemployed, working only part time.[22] At the same time generations of poor land management practices, such as clear cutting, had left millions of acres of land barren and wasting away. Without protective tree cover, soil erosion had become a major problem. While some effort had been made by the Forest Service to provide jobs for unemployed men by hiring them for the very labor intensive task of reforestation, it was not until Franklin Roosevelt was elected president that a massive nationwide effort was undertaken.

Roosevelt had been a supporter of conservation since his political career began in 1910. He had worked on a reforestation plan as chairman of the New York State Senate's Fish and Game Committee and when he became governor of New York in 1928 he sponsored an amendment to the New York state constitution giving the government the

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[22] John A. Salmond, *The Civilian Conservation Corps, 1933-1942; a New Deal Case Study* (Durham: Duke University Press, 1967), 3.

authority to purchase marginal land and reforest it. Roosevelt was able to carry out his state reforestation program and address the issue of rising unemployment by putting 10,000 unemployed men, all taken from New York's relief rolls, to work planting trees.

In his 1932 acceptance speech for the Democratic presidential nomination, Roosevelt declared that the "means of relief, both for the unemployed and for agriculture, will come from a wide plan for the converting of many million acres of marginal and unused land into timber land through reforestation ... In so doing, employment can be given to a million men..."[23]

Roosevelt's inaugural address on March 4, 1933 made only passing reference to such a plan, but by March 9th he began meeting with key staff to develop draft legislation for emergency conservation work. A bill went to congress on March 13th but was withdrawn in order to make modifications to limit potential opposition.

At Roosevelt's request, the Secretaries of War, Interior, Agriculture and Labor met on March 15, 1933 to work out details of the plan. Interior Secretary Harold Ickes called on Park Service Director Horace Albright to determine a potential scope of work in the parks. Albright called Chief Landscape Engineer Thomas Vint, Chief Forester John Coffman and Chief Engineer Frank Kittredge to Washington to assist in the planning. A draft bill for the Emergency Conservation Work (ECW) program went to congress on March 21st and was passed on March 31st.[24]

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[23] Quoted in "President Roosevelt's Emergency Conservation Work Program," (United States Government Printing Office, 1933).

[24] Salmond,8-15. Salmond provides a detailed account of the development of the legislation.

The legislation was titled *An Act For the relief of unemployment through the performance of useful public work, and for other purposes*. The act authorized the president to create a program to employ unemployed US citizens "in the construction, maintenance and carrying on of works of a public nature in connection with the forestation of lands belonging to the United States or to the several States."[25] The workforce of the ECW program was always known as the Civilian Conservation Corps (CCC). By 1937, the improving economy made the "emergency" nature of the program less of an issue and the name of the program was officially changed to the Civilian Conservation Corps.

Although reforestation was emphasized in the initial planning, resulting in the nick name of Roosevelt's Tree Army, the scope of work proposed for the CCC went well beyond simply planting trees. As a 1933 government brochure pointed out, tree planting could only be a "small part" of the work because "there are far too few nursery grown trees of the right kind and too short a time, when climatic and weather conditions are favorable, in which to plant trees or even to sow seeds".[26] Despite these limitations, CCC workers planted over 1.4 billion trees in the first five years of the program.[27]

Crews were also put to work on other aspects of forest health, including fighting fires, building fire roads, trails and fire towers, thinning trees and controlling forest

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[25] Text of the Act quoted in John C. Paige, *The Civilian Conservation Corps and the National Park Service, 1933 - 1942, an Administrative History* (Denver: Denver Service Center, 1985), 162.

[26] "President Roosevelt's Emergency Conservation Work Program,"7.

[27] Robert Fechner, *Objectives and Results of the Civilian Conservation Corps Program*, ed. Civilian Conservation Corps (U.S.) (Washington DC: 1938), 13.

insects and diseases such as blister rust. As historian John Salmond has written "The Civilian Conservation Corps was thus, in one sense, a catalyst. Through it, a new and vital president, Franklin D. Roosevelt, brought together two wasted resources, the young men and the land, in an attempt to save both."[28]

The plan for the CCC was modeled on Roosevelt's program in New York and similar small programs around the country and around the world. While the concept was not new, what was unprecedented was the massive scale and rapid mobilization of the program. By June 30, 1933, just three months after legislation creating the CCC was passed, CCC Director Robert Fechner reported to the president that:

"The selection and enrollment of 250,000 unmarried men between the ages of 18 and 25 years was initiated at once. On April 7, 1933, the first man was selected and enrolled for CCC work. Ten days later, on April 17, the first 200-man CCC camp was established at Luray, Virginia. Within three months the 250,000 young men, together with an additional 25,000 war veterans and 25,000 experienced woodsmen, had been assembled and placed in 1,468 forest and park camps extending to every section of the Union."[29]

This mobilization was made possible by the cooperation of not only the federal agencies involved, but local governments as well. Public welfare departments acted as selection agencies without reimbursement from the federal government. They benefited only by being able to take the men off their welfare rolls, and by the reduced aid needed

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[28] Salmond,4

[29] Conrad Wirth, *Parks, Politics and the People* (Norman: University of Oklahoma Press, 1980), 93.

for the men's families, due to the financial support they sent home.[30] Enrollees earned thirty dollars per month, and were required to send twenty-five dollars per month home to their families. Eligibility was limited to young men between the age of 18 and 24, and the majority of the enrollees were at the lower end of this range.

Of the camps established during the first period, there were 245 camps operating under the direction of the Department of the Interior. Seventy were located in national parks and one hundred two were located in state parks.[31] Throughout the existence of the CCC, NPS was responsible for directing the work of many more camps outside the national parks than within them. Only 25% of the camps administered by NPS were in national parks, 62% were in state parks and the remainder in other sites including county parks, municipal parks and Tennessee Valley Authority recreation areas.[32] While the enabling legislation focused primarily on forest health, in practice work on state park development was part of the program from the beginning.

NPS Oversight of State Park Development

The connection between the National Park Service and the development of state parks began long before the creation of the CCC. Stephen Mather, the first NPS Director, was instrumental in organizing the first National Conference on State Parks in 1921. The purpose of the conference was to promote the concept of public parks "within easy access

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[30] Civilian Conservation Corps U.S., "Activities of the Civilian Conservation Corps July 1, 1938-June 30, 1939," (1939), 10.

[31] Wirth, *Parks, Politics and the People*,103.

[32] Ibid.,145.

of all the citizens of every state and territory of the United States".[33] The organization held conferences annually through the 1920s, giving the states an opportunity to share ideas related to state park development.

State Parks shared the dual mandate of the National Parks in that they were intended to both conserve natural areas and provide opportunities for public enjoyment of those areas, but in the state parks there was a greater emphasis on the recreational use of the land. Unlike national parks, it was not considered absolutely necessary that the land set aside for state parks possess outstanding natural beauty. A greater emphasis was placed on proximity to population centers and the suitability for development of recreational opportunities. Given the overall ECW program goal of reclaiming wasting lands, the development of sub marginal lands as park areas was actually more appropriate in some cases.

Conrad Wirth, a Park Service Landscape Architect who had been working as the chief land planner at the Washington office, was assigned to head the NPS State Parks Division. Herbert Evison, secretary of the National Conference on State Parks, was hired by the park service to assist Wirth. The park service initially created four regional offices to administer state park work. District I covered the eastern states and was headed by John M. Hoffman, the former commissioner of Pennsylvania state parks. District II covered the Midwestern states and was headed by Paul V. Brown, who had worked for both Pennsylvania and Indiana state parks. District III covered the Rocky Mountain and

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[33] Beatrice Ward Nelson, *State Recreation: Parks, Forests and Game Preserves* (Washington D.C.: National Conference on State Parks, 1928).

Plains states and was headed by Architect Herbert Maier who had been a key figure in the development of the Park Service Rustic style in the 1920s and early 1930s when he was contracted to design museums for Yosemite, Yellowstone and the Grand Canyon. District IV covered the western states and was headed by Lawrence Merriam, a forester from California.

During the peak years of activity, the number of regions was increased to eight and then reverted back to four as activity began to decline. The intention was to keep the number of camps supervised by each region to no more than fifty. The regional offices were responsible for reviewing and supervising the planning and implementation of the work in the state parks. State Park Authorities were responsible for preparing park plans which were submitted to the NPS district offices for approval. States were encouraged to hire local landscape architects to prepare these plans, paid for with federal funds. Each region had four or five inspectors who traveled throughout their region to oversee the work being done by each camp, with the understanding that camps could be reassigned if the NPS planning and design standards were not met. The camp inspectors were generally landscape architects, engineers or foresters.[34]

The Depression had been hard on the practice landscape architecture, and by 1933 up to 90% of those in the profession were unemployed.[35] This created a large pool of applicants for the NPS inspector positions. In an example of the extent to which the Depression had changed peoples lives, one of the inspectors hired for Region IV was

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[34] Wirth, *Parks, Politics and the People*,111.

[35] Carr,249.

none other than Daniel Hull, the former Chief Landscape Engineer for the Park Service who had resigned in 1927 to pursue private practice. While in private practice, Hull had worked as a consultant with Frederick Law Olmstead Jr. on the 1929 *State Park Survey of California*, which served as a model for state park development throughout the country.

The inspectors spent most of their time on the road, traveling from park to park and generally spending just a few days in each. During the first six months of the program the inspectors visited many of the proposed sites and helped prepare and review plans for selected sites. Although the work in state parks was organized as a separate entity with in the National Park Service, there was some cross over between staff in state and national park work. Camp assignments were for six month periods and depending on their location some were only seasonal. These factors contributed to a great deal of movement for design staff which helped facilitate the exchange of ideas across geographic areas and between the state and national park systems.[36]

In addition to the regional inspector positions, the park service directed that a landscape architect be employed at each camp operating in state or national parks.[37] This meant employment for hundreds of landscape architects under the direction of the park service, when just ten years before there had been only three. The preference was that the landscape architects hired for each camp should be from the area where the camp was located so they would be familiar with local conditions.

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[36] McClelland. McClelland provides a detailed description of the inspectors role on pages 400-406.

[37] Carr,252. Carr refers to an August 1933 directive by NPS Director Arno Cammerer that appeared in *Landscape Architecture* in October 1933.

A number of skilled local men were also hired to supervise the workers at each camp. These men were known as Local Experienced Men, or LEMs[38]. Their positions were included in the initial ECW legislation partly to ease fears that CCC workers brought in from other parts of the country would be taking potential jobs away from local residents.

With the NPS oversight of planning and design, the high level of expertise possessed by the camp supervisors and the vocational training provided to the enrollees, it quickly became apparent that the workers were capable of accomplishing more sophisticated tasks than initially envisioned. Their work quickly expanded to the construction of small structures like picnic shelters and comfort stations.

Herbert Maier had worked closely with Thomas Vint's Landscape Division when he was developing museum plans for the park service. Maier's work in the rustic style had evolved from the 1925 Yosemite museum, which was nearly a copy of Myron Hunt's adjacent Yosemite Administration Building, to the four trailside museums at Yellowstone in 1929-31, which are considered some of the finest examples of Park Service Rustic architecture ever built. Maier had also become a leading spokesman for the style, articulating the principles of the rustic style both in his designs and with words.

As a District Director, Maier quickly recognized a need to provide guidance for his inspectors to assist them in determining the appropriateness of design and construction for structures built by CCC workers in the state parks. He put together a small album of

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[38] LEMs were referred to as "Local Employable Men" in some Depression era publications, but "Local Experienced Men" was the more common and apparently official term.

photographs of park structures, including structures he designed, with comments on the strengths and weaknesses of the designs.

Conrad Wirth had also recognized the need for developing guidance for the hundreds of inspectors and designers now employed in park development. Wirth hired Dorothy Waugh in 1934 to collect plans and elevations of various park structures to be compiled in guidebooks to be distributed to the district office and state park authorities. Waugh was the first woman landscape architect hired by the Park Service.

In 1935, Wirth hired architect Albert Good to lead a team to produce a more comprehensive portfolio of park structures. Both Waugh and Maier were part of the team, as was Thomas Vint. The group produced its first book, *Park Structures and Facilities*, in 1935 and an expanded, three volume set, *Park and Recreation Structures,* in 1938. These guidebooks are described in detail in the following chapter. The intention was that local landscape architects would use the books as examples of design principles and would then adapt the principles to local conditions. The books served as a means of ensuring basic Rustic design principles were followed at CCC built parks nationwide.

For the first three years of the CCC program, CCC work within the National Parks was supervised by NPS Chief Forester John Coffman while work in the state parks was supervised by Wirth. In 1936, CCC work for both national and state parks was consolidated under Conrad Wirth, to be carried out under the District structure established for state park work. By this time seventy percent of Park Service personnel were working on CCC related work. The consolidation was a step toward the regional structure for the entire Park Service that remains in place today.

The role of the park service grew to include not just the development of individual parks, but also the planning for nationwide recreational activities. In 1934 a small study was undertaken by the park service, led by Herbert Evison and George Wright, the chief of the Park Service wildlife division. Wright was a strong advocate for preserving nature in the national parks. He supported the expansion of the Park Service role in nationwide recreation planning partly because developing recreational opportunities elsewhere alleviated some of the pressure for development within the national parks.[39]

The 1934 study established a need for a much larger study, and in 1936 congress passed the Park Parkway and Recreational-Area Study Act authorizing the park service to do just that. Forty-three states agreed to participate in the study, and thirty-four completed extensive surveys of their own resources and needs, compiled into the 1941 final report, *A Study of the Park and Recreation Problem of the United States*. The act also formalized the national recreational planning process, ensuring that individual park plans were coordinated with a comprehensive plan for nationwide recreation.

One type of park development carried out by the CCC was the Recreational Demonstration Area, or RDA. Recreational Demonstration areas were intended to serve as models of park planning and development to encourage state and local governments to engage in similar projects. Unlike other state park areas being developed by the CCC, the land for RDAs was actually purchased by the federal government, with the intention of turning it over to state and local governments upon completion.

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[39] Richard West Sellars, *Preserving Nature in the National Parks* (New Haven: Yale University Press, 1997), 138.

President Roosevelt saw the potential for land that had been poorly used or had limited economic value to be converted to recreational use. In 1934 five million dollars was set aside to purchase land for that purpose. NPS regional inspectors for state park work participated in the selection of land for the RDAs. A variety of types of recreation areas were developed under the program ranging from highway waysides to large well developed camps that provided opportunities for low cost vacations for families, groups and organizations.

CCC Accomplishments

The CCC took young men out of the desperate situation so many were in during the Depression and gave them an opportunity to learn job skills and restored their sense of hope. A study of 15,000 enrollees found that within the first six months of service in the CCC, each gained an average of 7.23 pounds.[40] According to a 1938 government report on CCC activities, "in the CCC, young men learn discipline, sanitation, acquire physical hardihood, have the childishness knocked out of them, and develop the ability to care for themselves. In short, they have become better men." Camp educational programs provided job training and within the first five years had taught 65,000 illiterate enrollees to read.[41] Even in 1939, when the economic recovery was under way, there was still an average of 3.5 applicants for every enrollee position.[42]

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[40] Wirth, *Parks, Politics and the People*, 99.

[41] Fechner, *Objectives and Results of the Civilian Conservation Corps Program*, 33.

[42] U.S., Civilian Conservation Corps,1.

Enrollees, many of whom came from urban backgrounds, also gained an appreciation of nature and environmental conservation. Many enrollees reported that this was one of the most valuable lessons their experience taught them. By creating facilities that made natural areas more easily accessible, the CCC played a role in making the general public more appreciative of nature and more aware and supportive of the need for conservation as well.

The total state park acreage in the country, not including the Adirondack and Catskill State Forests of New York, nearly doubled from just under a million acres in 1933 to nearly two million acres in 1939. By 1939, 681 CCC camps had been established to develop improvements in 867 state recreation areas. [43] These figures represent only the work done by the CCC in state parks. The CCC's overall contribution to the development of recreational facilities was even greater, including work in the national parks, municipal parks and recreation areas on other government land such as that held by the Forest Service and the Tennessee Valley Authority.

The CCC provided a workforce, but much of the tangible enduring legacy of their effort is a result of careful planning and design. The structure of supervision of state park work by the National Park Service ensured that recreational opportunities were developed nationwide according to a carefully thought out plan. The system of park master planning developed by Thomas Vint for national park work was quickly and effectively adapted to state park development. Design of structures within these plans was guided by Park

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[43] Ibid.,55-56.

Service Rustic design principles that had been evolving since the Park Service was established in 1916.

CHAPTER IV

NATIONAL PARK SERVICE RUSTIC DESIGN GUIDELINES

> In any area where the preservation of the beauty of Nature is a primary purpose, every modification of the natural landscape, whether it be by the construction of a road or erection of a shelter is an intrusion. A basic objective of those who are entrusted with development of such areas for the human uses for which they are established, is, it seems to me, to hold these intrusions to a minimum and so to design them that, besides being attractive to look upon, they appear to belong to and be a part of their natural settings.[44]
>
> Arno Cammerer, NPS Director, 1935

Guidebooks for Park Structures

The massive mobilization of CCC enrollees working on park development meant there were suddenly hundreds of landscape architects designing park structures under the direction of the National Park Service. When Thomas Vint became Chief Landscape Engineer for the Park Service in 1927, he recognized that park design was specialized work and had developed his staff gradually by having each new hire work at the headquarters in San Francisco for a year under his supervision before they were sent out to the field. There was no time to institute a similar mentoring program for designers in the state park division.

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[44] Albert Good, *Park Structures and Facilities* (Department of the Interior, National Park Service, 1935), 1.

Herbert Maier was familiar with Vint's mentoring system, including Vint's practice of maintaining a portfolio of representative structures for designers to use as a reference. Shortly after becoming District IV Director for state park work in 1933, Maier began developing his own portfolio of structures illustrating the basic principles of Rustic design. Included in Maier's portfolio were images of structures he had designed for the National Park Service while in private practice under contract with the American Association of Museums.

Maier's portfolio used his own designs as examples of both good and not so good design. His caption for the photo of the first structure he designed for the Park Service, the 1924 Glacier Point Lookout at Yosemite, reads "An Example of Poor Scale" and goes on to describe the structures walls as too thin, the roof too light, the arch poorly done and the stones too small "especially along the lower courses where building should give appearance of growing out of the solid rock".[45] He was slightly less critical of his next design, the Yosemite Museum, saying the entry was "a fairly good example of a rough stone arch ... the arch rocks might have been a trifle larger"[46]

Maier used his museum structures at Yellowstone, completed just before he accepted the District IV Director position, as good examples of the Rustic style. He used the Norris Geyser Basin Museum as "A good example of material in scale – rocks, logs and shakes. Note the necessity for over-sizing structural members in park architecture ... Note splay of stone pylon near base ... All exposed log members should be selected

[45] Herbert Maier, "Inspectors Photographic Handbook," (National Park Service, n.d. ca.1934), 18.

[46] Ibid.,16.

knotty with the most interesting sides exposed – there is nothing esthetic in a pole. Observe that this is "free-hand" architecture."[47]

While Maier was developing guides for the inspectors in his region, Conrad Wirth also recognized the need to develop design guidance for inspectors nationwide. He hired Dorothy Waugh to create a design portfolio to be used as a reference in all regions. Waugh was a landscape architect and illustrator born in to the profession as the daughter of Frank Waugh, a professor of landscape architecture who wrote a number of books and articles on park design. Wirth had studied under Frank Waugh at Massachusetts State College. Dorothy Waugh collected plans and elevations of representative rustic park structures built in state and local parks and compiled them in two volumes. The first volume focused on "comfort stations and privies", terms distinguished by whether the structures had plumbing. The second portfolio included a wide range of structures including everything from small scale features such as benches and fireplaces to larger structures like cabins, bathhouses and administration buildings.

Waugh produced simplified drawings of plans and elevations based on the blueprints she had gathered. The simplified drawings were meant to illustrate the general principles of rustic design as they applied to specific types of structures, not to serve as a pattern book. State park authorities were encouraged to have their designers create new designs based on rustic principles and adapted to the specific characteristics of their site.

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[47] Ibid., 1.

The portfolios were in a loose leaf binder format, allowing for additional examples to be added as more were built.[48]

In 1935, Herbert Maier was invited to speak at the National Park Service Conference of State Park Authorities. Maier's speech at the conference is considered the first comprehensive statement of the principles of rustic design. The underlying concept was that buildings should be designed to harmonize with the environment in order to be as inconspicuous as possible. In his speech, Maier laid out the basic principles that could aid in achieving that harmony with the environment.

As early as 1926, Maier had described development in parks as "necessary evils".[49] In his speech at the 1935 conference, Maier elaborated on the concept, saying parks were "on account of their superior natural make-up, subjected to trespassing by vacationists, squatters, picnickers and hikers ...as a result of which a continuous fire hazard exists, sanitation considerations are sometimes unhealthful, and the uncontrolled use of the areas is unfavorable to wildlife conservation."

Maier explained that roads, trails and structures were needed "in order that the original purpose of the area could be attained by controlling the circulation and activity of the visitors."[50] The challenge he describes in the need to design facilities for visitors while minimizing the visual impact of those facilities on the landscape the visitors come

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[48] See McClelland. 424-429 for a more detailed description of Waugh's work.

[49] Maier, "The Purpose of the Museum in the National Parks."

[50] Quoted in Carr,282.

to experience parallels the so called "dual mandate" of the National Park Service to both protect natural areas and provide for the enjoyment of those areas.

In conjunction with the conference Maier coauthored an article with Albert Good published in the 1935 *American Planning and Civic Annual* titled "Structures in State Parks – An Apologia". Good was an architect from Ohio with experience designing park structures for Ohio state parks that had recently been hired by Conrad Wirth to lead a team of designers in developing a more comprehensive portfolio of park structures. The article they coauthored mirrored Maier's speech at the conference and later, in a slightly revised form, provided an introduction to the portfolio the team was developing.

In describing the need to subordinate park structures to their surroundings, the article stated "structures, however well designed, almost never add to the beauty, but only to the use, of a park of true natural distinction. Since the primary purpose of setting aside these areas is to conserve them as nearly as possible in their natural state, every structure, no matter how necessary, can only be regarded as an intruder. Man has slowly come to realize that, if trespass is unavoidable, it can be done with a certain grace. The need proved, his undertaking is somehow legitimized or not, by harmony or lack of it."[51]

The portfolio the team was working on was published later that year, titled *Park Structures and Facilities.* The team, which included Herbert Maier, Dorothy Waugh, Thomas Vint, Paul Brown, Oliver Taylor and Norman Newton, selected representative structures for the portfolio and provided input on the text. Structures were grouped

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[51] Herbert Maier and A.H. Good, "Structures in State Parks - an Apologia," in *American Planning and Civic Annual*, ed. Harlean James (Washington D.C.: Mount Pleasant Press, 1935), 171.

according to type, with a brief narrative describing how the principles of Rustic design were embodied in the structures. Photographs of representative structures were included, along with captions giving their location. The designers were not listed, due to what the editors described as a lack of information. For many structures, Good prepared plans and elevations. For a few, section drawings or other details were included. The written descriptions of the basic principles of Rustic design were a collaboration by Good and Maier. Examples of structures from municipal, state and national parks were included in the book.

In 1938, the Park Service published an expanded version of the portfolio, with Good again acting as editor. The 1938 version was published as a three volume set. Volume one, "Administration and Basic Service Facilities" and volume two "Recreational and Cultural Facilities", contained the same types of structures found in the 1935 book. Volume three, "Overnight and Organized Camp Facilities" contained structure types not represented in the earlier book, reflecting the expansion of the types of facilities being developed in state parks under National Park Service guidance. The format was the same as the 1935 book, starting with a revised "Apologia" describing rustic design principles followed by representative structures grouped by type. A typical page from the book is shown in Figure 6.

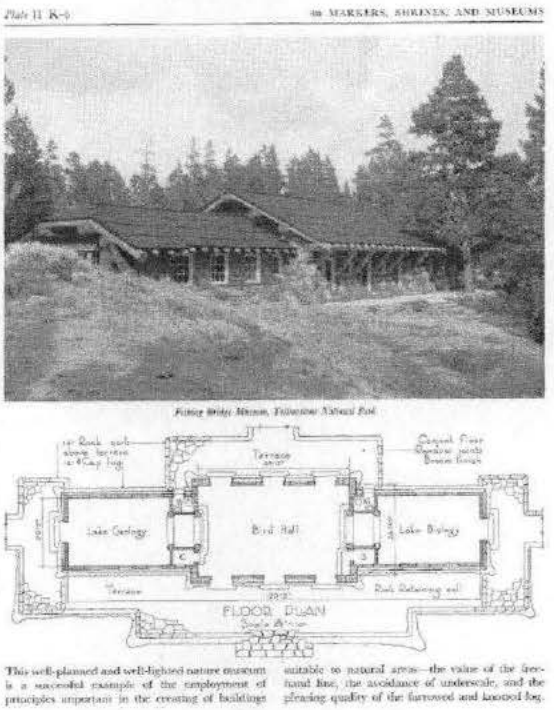

Figure 6. Typical Page from the 1938 book *Park and Recreation Structures.*

The "Apologia" also addressed the purpose of the portfolios, making it clear they were not meant as pattern books or as a substitute for hiring professional designers. Good argued that the structures contained in the portfolios earned recognition because their designers training, imagination and skill combined to produce structures appropriate to their setting. He argued that only those with similar skills were equipped to decide weather a particular design might be adaptable to another setting, and to determine what modifications might be needed to adapt a design to a different setting.

The extent to which included designs might be suitable for adaptation depended in part on the type of structure. Good suggested there were three types of structures represented in the portfolios. The first were small structures most appropriate for

duplication. An example of one of the pages showing these type of structures is shown in Figure 7. These were presented in greater detail in the books to facilitate adaptation. Good insisted this was not "an invitation to indiscriminate copying" but offered solutions to recurring problems without requiring a "new solution claiming the sole and debatable distinction of originality."

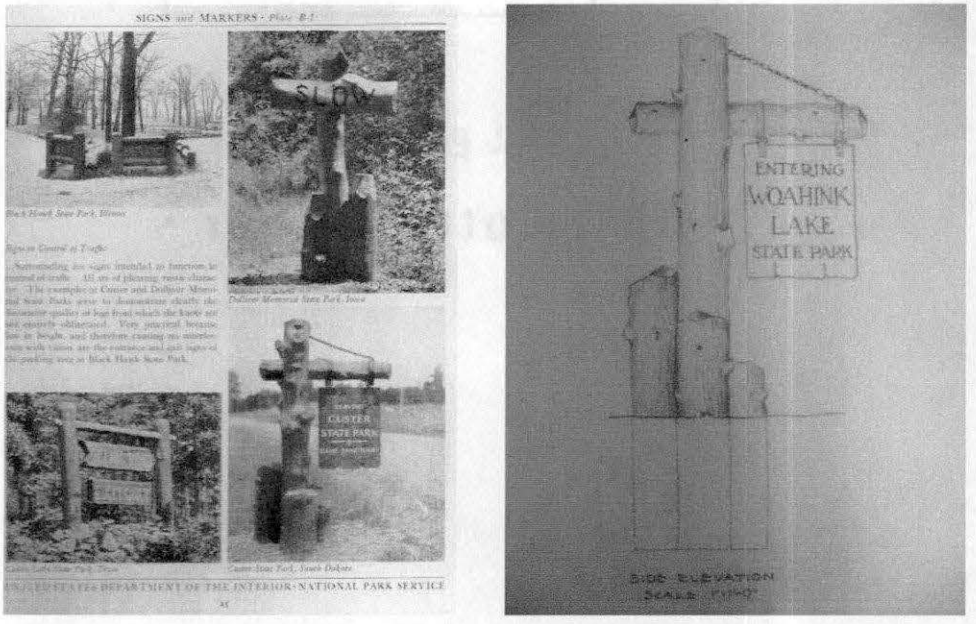

Figure 7. A page from the 1938 book, *Park & Recreation Structures*, showing an example of small features possibly suitable for duplication. The drawing on the right (from Oregon State Park files) is for a state park in Oregon, later renamed Honeyman State Park

The second category included "subjects eminently suited to particular locations, but promising little success with outright transplanting into another environment." These were presented in less detail and intended primarily as examples of structures that were well designed to harmonize with their environment. These might be used as inspiration for designs for other locations, with a warning that only competent professionals could

avoid too literal a translation that might produce "structures appropriate in one locality becoming hideous caricatures elsewhere".

The third category contained successful solutions to highly unique circumstances, presented purely as inspiration. Good noted that "Plagiarism, subtle or obvious, in structures within this category would be a crowning stupidity"[52]. While the categories were defined in the opening text, structures were not individually labeled or grouped as to which category they belonged. The "competent professionals" using the guide were left to determine which was which, hopefully avoiding the pitfalls of "crowning stupidity".

Rustic Design Principles

Master Plans

"The features to be emphasized and stressed for appreciation in parks with which we are here concerned are the natural features, not the man-made... The individual building or facility must bow deferentially before the broad park plan, which is the major objective, never to be lost sight of."[53]

The need for master plans for parks was one of the reasons for the creation of the National Park Service, so it is not surprising proper planning was addressed in the design portfolios. Good argued that structures in a park are less obtrusive if they have a unified architectural style and are constructed of similar materials, echoing the ideas and practices of Park Service designers starting with the first landscape architects, Mark Daniels and Charles Punchard.

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[52] Good, *Park Structures and Facilities*, 7.

[53] Ibid., 4.

Good suggested that "since structures exist in parks through sufferance, it follows that it is highly desirable in every area to keep down the number of them." This could be achieved by not building extraneous structures, i.e. limiting lookouts to a few key points rather than one on every hilltop, or by combining functions in single structures rather than cluttering the landscape with smaller structures. While cautioning against over doing this approach to the point of creating excessively large buildings, he argued "localizing of infection is preferable to an irritating rash of structures all over an area". [54]

Subordination of Structures to the Environment

"In its most satisfying expression, the park structure is designed with a view to subordinating it to its environment."[55]

A number of approaches were recommended to aid in subordinating structures to their environment. The preferred and perhaps simplest method was to locate the structure in a secluded location in the terrain or behind some existing plant material. If such a site were unavailable, Good suggested creating a screen by planting native plants similar to those found adjacent to the structure. Foundation plantings were also recommended to "gracefully obliterate the otherwise unhappy line of demarcation between building and ground" (see Figure 8).

The colors used in the structure could also help lessen its visual impact. Colors which occurred naturally in the immediate environment were recommended, particularly warm browns and light grays. Green was to be avoided due to the difficulty in finding an

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[54] Ibid., 6.

[55] Ibid., 4.

appropriate shade and the tendency for it to fade to something even less appropriate. For some smaller architectural details, such as window muntins, a light buff or stone color was acceptable.

Figure 8. Pump House at Honeyman State Park, Florence OR placed in secluded setting; ferns blur the line of demarcation with the ground.

Good warned designers against focusing design efforts on a primary elevation, as they might in urban settings. "Some park structures give a hint of their designers' long dalliance in cities, where architectural design has become a matter of one facade. It should be remembered that park buildings will be viewed from all sides, and that design cannot be lavished on one elevation only. All four elevations will be virtually front elevations, and as such merit careful study."[56]

The form of the structure was also critical. Good suggested that design with a horizontal emphasis were more readily subordinated to their surroundings. The roof pitch was to be low, not more than one third. These principles echoed Herbert Maier's

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[56] Ibid., 5.

comments on his design for the Yosemite Museum (Figure 9). In a 1926 article, Maier wrote:

"The elevation of the museum stresses the horizontal – that seemed the logic of the situation. … To attempt altitudinal impressiveness here in a building would have meant entering into competition with the cliffs; and for such competition the architect has no stomach. The horizontal key, on the other hand, makes the museum blend easily into the flat ground … and some distance away the building is lost to sight, swallowed by the over topping forest – a point of merit in terms of what has been said of preserving parks undefiled by man's handiwork."[57]

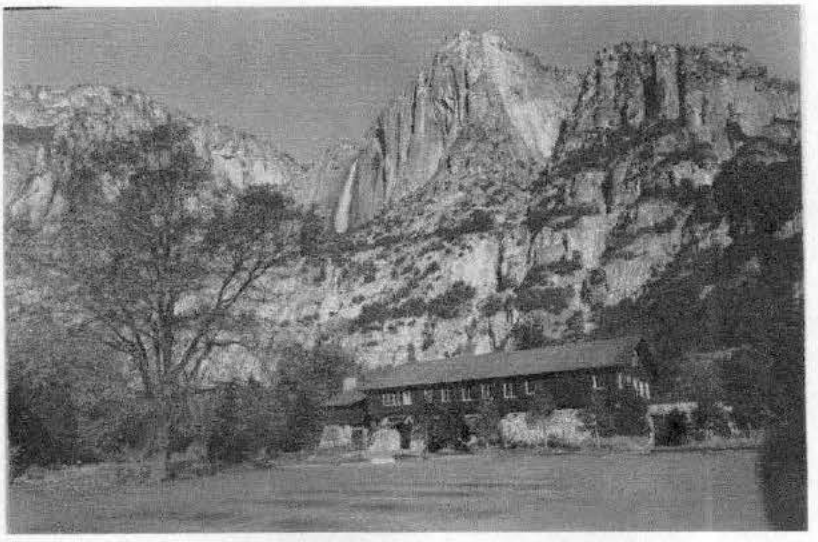

Figure 9. Yosemite Museum, designed by Herbert Maier in 1924. Photo from Yosemite Research Library.

Materials: The Quality of Nativeness

"The quality, not the fact, of "nativeness" of materials is of value. Local stone, worked to the regularity in size and surface of cut stone or concrete block, and native logs

[57] Maier, "The Purpose of the Museum in the National Parks," 38.

fashioned to the rigid counterpart of telephone poles or commercial timber, have sacrificed all the virtue of being native."[58]

The use of native materials such as locally available stone and logs is perhaps the most commonly recognized principle of rustic design, but Good pointed out it was the way in which these materials were used that was critical in giving structures a rustic character.

Proper use of stone was considered one of the keys elements of rustic architecture. "The rock selected should first of all be in proper scale. That is, the average size of the rocks should be sufficiently large to justify the use of masonry. Whether in retaining walls or in buildings or bridges it is usually better to employ rough rockwork or rubble than to use cut stone. The weather faces of rock should be exposed. Rock should be selected for its color and for the lichens and mosses that abound on its surface as well as its hardness. Above everything else, rocks should be laid geologically correct, that is, they should be placed in their natural beds."[59]

Good suggested use of a variety of rock sizes to create visual interest, avoiding laying the rock in courses. Larger stones were recommended at the base, with stones nearer the top of a wall generally, but not exclusively, smaller. Mortar joints were generally narrow and recessed. Stone walls were generally to be battered, or splayed out at the base, to give the building "that agreeable look of having sprung from the soil" (see Figure 10).

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[58] Good, *Park Structures and Facilities*, 5.

[59] Maier and Good, "Structures in State Parks - an Apologia,"175.

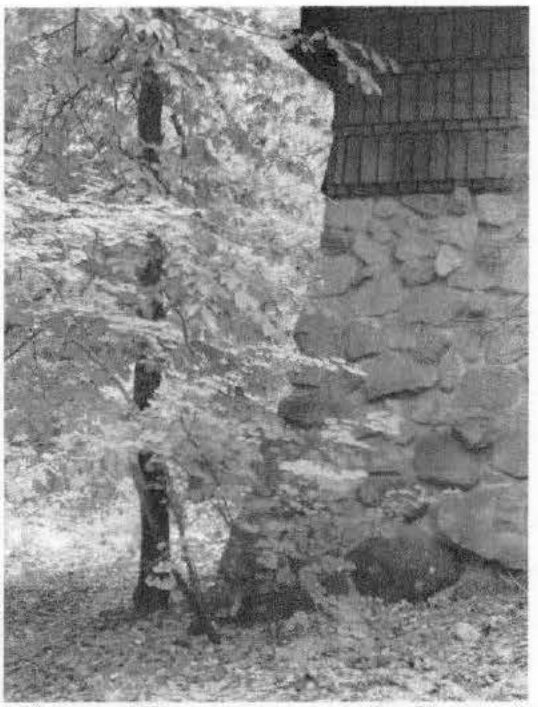

Figure 10. Yosemite Museum SW corner, an example of battered native granite rubble wall with larger stone at base.

For log work, Good recommended "Logs should never be selected because they are good poles. There is nothing aesthetically beautiful in a pole. Logs desirable in the park technician's viewpoint are pleasingly knotted".[60] While acknowledging some early rustic structures had log work with the bark left on, Good advised the bark be stripped off to prevent deterioration inevitably caused by insects and moisture trapped under the bark.

Good suggested materials should be worked in accordance with local early building traditions, both those of native populations and early European settlers. He wrote designers should be "aware of those unvoiced claims of those long gone races and earlier generations that tracked the wilderness ... adapting to his structures such of their

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[60] Good, *Park Structures and Facilities*,5. A nearly identical quote is found in Maier's 1934 Inspectors Handbook

traditions and practices as come within his understanding." Mary Coulter had incorporated regional traditions in her designs at Grand Canyon, and Park Service Director Stephen Mather encouraged pioneer traditions in 1923 when he suggested the ends of logs in park structures be ax cut.[61]

Proper Scaling of Architectural Elements

Regardless of the material being used, proper scaling was critical. Particularly in rugged mountainous and forested areas, log and stone structural elements were to be "reasonably overscaled to the structure itself to avoid being underscaled to the surrounding terrain". The over scaling could be reduced proportionally to the ruggedness of the surroundings, although Good cautioned against reducing scale to the point of producing "twig" architecture. Maier's hand captioned photos in his 1934 *Inspectors Handbook* used his own buildings as example of proper scale. The photo in Figure 11 shows his 1924 Glacier Point Lookout at Yosemite, his first rustic design for the park service. His notes on the back of the photo say walls should have been twice as thick and that the roof is too light.

The photo in Figure 12 shows Maier's Norris Geyser Basin Museum at Yellowstone, designed five years later when both the style and Maier's grasp of the style had matured. His notes on the back of this photo note the building is a "good example of material in scale – rocks logs and shakes. Note the necessity for over-sizing structural members in park architecture."

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[61] Tweed, Soulleire, and Law, *National Park Service Rustic Architecture: 1916 - 1942*,35.

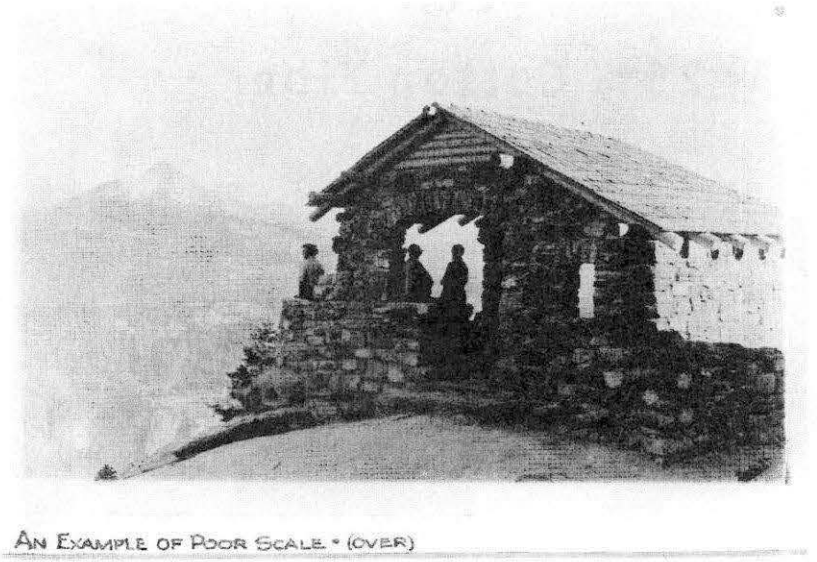

Figure 11. Glacier Point Lookout, sample page from Herbert Maier *Inspectors Handbook*.

Figure 12. Norris Geyser Basin Museum, sample page from Maier's *Inspectors Handbook*.

Conclusion

With the strong emphasis on harmonizing structures with their immediate surroundings it is not surprising that a wide variety of designs fall within the category of rustic architecture. If the principles are properly followed, a structure in the desert will look nothing like a structure in a forest, yet both can be classified as "Rustic". As Good said of the rustic style:

"Successfully handled, it is a style which, through the use of native materials in the proper scale, and through the avoidance of rigid, straight lines, and over-sophistication, gives the feeling of having been executed by pioneer craftsmen with limited hand tools. It thus achieves sympathy with natural surroundings and with the past."[62]

[62] Good, *Park Structures and Facilities*,4

CHAPTER V

ASSESSMENT OF EXISTING CONDITION AND INTEGRITY

The first step in determining appropriate treatment for the maintenance and repair of historic structures is a thorough evaluation and documentation of the structure, including the assessment of both current condition and historic integrity. Assessment of the condition of a structure identifies deterioration of the building fabric and causes or potential causes of actual or anticipated deterioration. Evaluation of the historic integrity of a structure identifies the presence or absence of original character defining features of the structure. During the initial evaluation, the existing situation related to both condition and integrity should be documented in field notes, sketches and photographs.

Existing Condition

While the basic principles of Rustic architecture have a strong emphasis on minimizing the visual impact of structures on the natural environment, much less design emphasis was focused on minimizing the impact of the environment on the structures. Some Rustic design details, such as projecting log purlins, wood in close proximity to the ground and screening with closely planted vegetation, can contribute to rapid deterioration of the structures if not closely monitored and maintained. These design factors should be taken in to consideration when conducting the initial assessment of the structure.

Site Conditions

Assessment of park structures should include an evaluation of the site and factors related to the site that may contribute to the deterioration of the structure. In the Pacific Northwest, many of the structures constructed by the CCC are located in damp forested areas in the western portion of the region. Following the design principle of subordinating the structure to the landscape often meant structures were built where they were naturally screened by existing plant material or additional plantings were added to "gracefully obliterate the otherwise unhappy line of demarcation between building and ground."[63] The dense vegetation in these areas often limits sunlight and airflow, exacerbating moisture problems inherent in the rainy climate. Conversely, structures sited to take advantage of a view might be located on an exposed promontory where strong winds and the effects of repeated cycles of moisture and drying may accelerate deterioration of native materials.

Given that the setting of park structures was integral to their design, drastic changes to the setting are generally not appropriate unless such changes are done to restore the historic appearance. The site should be carefully analyzed, however, to determine an appropriate balance between maintaining harmony with the landscape and maintaining the structure. During the initial evaluation, site conditions that may contribute to building deterioration should be noted. This includes observations about whether the slope of the ground effectively directs water away from the structure, the presence of excessive amounts of organic duff build up near the structure and the impact of vegetation. Impacts

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[63] Ibid.

from vegetation may include tree roots undermining the foundation, tree limbs raking across the surface of the roof or siding, or plants trapping moisture against the structure. Both current and potential future impacts should be noted. Potential impacts include threats like trees or limbs that appear likely to fall into the structure.

It was part of the designer's intent that native materials like stone should be allowed to weather to blend in with the surrounding landscape. The presence of a small amount of moss and lichen build up on stonework was considered acceptable, even desirable. This should be noted during the assessment however; as excessive growth can be an indicator of moisture problems that can hasten the deterioration of the structure. Site conditions that may be contributing to the moss build up should be noted as well.

For example, the CCC built pump house at Honeyman State Park in Florence Oregon, shown in Figure 13, is located in a secluded gently sloping site in a dense coastal forest. There is moss present at the base of the walls on both the interior and exterior of the structure. There is also efflorescence and moisture present on the interior at the base of the rear wall. Evaluation of the site revealed that soil and organic duff were sloped toward the rear wall and were built up on the outside of the wall to approximately the same height as the efflorescence and moss build up on the interior face of the wall, directing and holding moisture against the wall and contributing to the interior moisture problems.

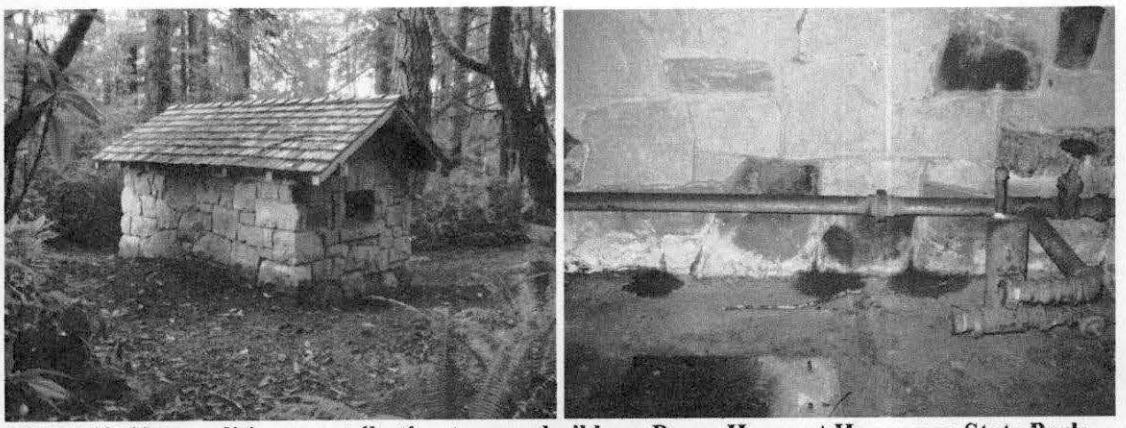


Figure 13. Site conditions contributing to moss build up. Pump House at Honeyman State Park, Florence OR. Note moss and efflorescence on interior walls.

Roof

Wooded settings also contribute to the build-up of organic duff on building surfaces, such as roofs. This contributes to deterioration of any roofing material, but is particularly damaging to commonly used native materials like wood shakes. Initial evaluation of the structure should note such build up and routine removal of such material should be included as part of regular maintenance. The initial assessment should describe the type of roofing material including details such as thickness, exposure and pattern of roofing shakes or shingles. Evidence of deteriorated roofing materials, such as splitting, curling or missing shingles should be noted.

The underside of the roof also should be thoroughly inspected for any evidence of moisture or rot. Log rafters can be particularly susceptible to rot from the top down. The top face of log rafters was often flattened with an adze to provide a flat surface to attach roof sheathing. The unevenness of the adze work often created a haven for moisture.

Wood Elements

In assessing the condition of Rustic structures, particular attention should be paid to design elements that are prone to failure. The design of Rustic Style buildings purposely exaggerates rustic elements. Often roofs are constructed with log or timber purlins or rafters, with these structural elements extending beyond the plane of the roof as shown in Figure 14.

Figure 14. Comfort station at Millersylvania State Park, near Olympia WA, note duff build up and moss growth on roof and rotted projecting purlin at right.

Compounding the problem, the ends of these members were often bevel cut with either a saw or an ax. While bevel cutting these members creates a more rustic appearance it also maximizes the end grain surface area of the wood. Due to the cellular structure of wood the end grain surface absorbs more moisture, so having these rough cut ends exposed to the weather makes rot inevitable if the structure is not constantly monitored and properly maintained. Since the top of these elements are subjected to the most moisture, they generally rot from the top down, with the problem not noticeable

from ground level until the damage is severe. A similar problem exists in rustic style log structures designed with the log crowns exaggerated, extending beyond the roof plane as shown in Figure 15.

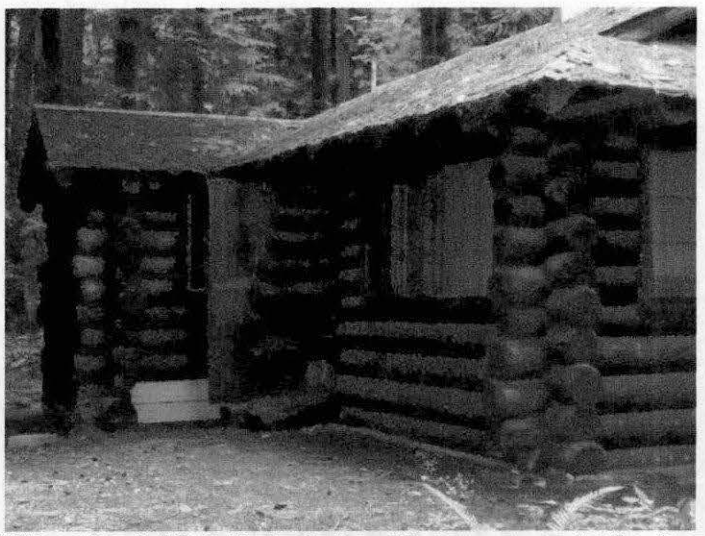


Figure 15. Millersylvania State Park, design of log crowns projecting beyond the roof plane and in close proximity to the ground contributed to rot.

In addition to exposure to moisture falling from above, wood elements on many Rustic structures are subjected to moisture from being in close proximity to the ground. Rustic structures were generally designed to have as low a profile as possible in order to minimize their visual impact on the landscape. This often resulted in limited clearance between the ground and wood members, and over time the distance may have been reduced even more by the build up of organic matter and soil. To whatever extent possible, these situations should be noted as part of the site assessment and clean up or regrading accomplished as soon as possible to limit damage to the structure. Wood in these locations is particularly prone to rot should be carefully inspected during the initial assessment.

Although generally discouraged by the time the CCC was constructing park structures, some early Rustic structures were designed with the bark left on the logs, which tends to trap moisture between the bark and the log and creates a safe haven for wood destroying insects. Log checking, cracks running with the grain of the wood, are a normal and generally harmless result of seasoning of wood that add to the rustic visual character. Checks should be monitored however, as they can also create avenues of moisture penetration and pest infestation, particularly if the checks are on the top of a horizontal surface.

All wood members should be carefully inspected for signs of deterioration or conditions that could lead to deterioration. This includes both visual inspection of surface areas and probing potential problem with a tool like a pocket knife or a moisture meter. Tapping wood members to listen for a hollow sound indicative of rot is another preliminary assessment method.

Stone

Stone work should also be inspected for signs of deterioration. As noted earlier, excessive build up of moss and areas with any efflorescence should be evaluated to determine the moisture source, and the stone in these areas should be checked for signs of deterioration like delamination or spalling. Mortar joints should be checked for any areas where mortar is cracked, loose or missing. Signs of inappropriate repairs, like mortar repointing with mismatched material or craftsmanship, should also be noted.

Metal

Missing or deteriorated metal elements should also be noted during the initial assessment. A fairly common problem in stone camp stoves is the rusting of ferrous metal stove parts embedded in either the stone or the mortar. Expansion of these parts as they rust often leads to cracking of mortar and even of the stone. Initial assessment should note any such damage to materials adjacent to the metal parts.

Assessment Checklist

During the initial assessment, using a checklist or inspection form can help ensure key issues are documented to serve as a basis for planning treatment of the structure. The field inspection form shown in Table 1 is designed to facilitate the initial assessment process for rustic park structures. An example of a completed field inspection form is included in Appendix B.

Table 1. Rustic park structure assessment checklist.

Rustic Park Structure Assessment Checklist				
Identification				
Name/Type of Structure				
Description/Size *Brief description of overall form of structure, including dimensions of footprint*				
Location *Include name of park and location within park*				
Date of Inspection				
Weather on Inspection Date				
Inspected by				
Site Plan *Sketch site, include north arrow, location of major plants & trails, roof plan, direction of ground slope, adjacent features such as lighting and utilities*				
Assessment		Good	Fair	Poor
Site: Vegetation *Branches touching structure, overhanging limbs, roots undermining foundation, etc.*				

Ground Slope/Drainage *Does the ground slope allow proper drainage? Is there evidence of ponding in or around the structure?* **Other site elements** *Lighting, trails, utilities, etc.* **Other site conditions** *Bodies of water, prevailing winds, etc.*				
Foundation		Good	Fair	Poor
Type *Describe materials/ type of foundation*				
Condition *Describe any deficiencies such as cracks, loose mortar, rotted wood, etc.*				
Stone				
Type *Describe other stone features, including walls and chimneys. Include type of stone, if known, relative size and character of stone (ashlar vs. rubble), character of mortar joints*				
Condition *Describe any deficiencies such as cracks, loose or missing mortar, spalling, efflorescence, heavy moss growth*				

Exterior Wood Elements		Good	Fair	Poor
Posts/Structural Elements **Type** *Describe any wood structural elements, such as posts, purlins or other roof structure railings, etc. Are they log? Rough sawn timbers? Bevel cut ends? Do elements project beyond the roof plane? Are elements in close proximity to the ground?*				
Condition *Are any wood elements rotted? Focus on areas prone to rot, ie tops of horizontal surfaces exposed to weather including projecting purlins, elements close to ground.. Condition of coatings? Checking of logs or timbers?* *Moss or other plant growth?*				
Wood Siding				
Type *Describe siding, ie vertical board and batten, horizontal lap, log, etc. Include width of components*				
Condition *Describe any deficiencies including evidence of rot, warping, rodent holes, condition of coatings, etc. Focus on connections with masonry, proximity to soil*				

Windows and Doors		Good	Fair	Poor
Type *Describe style and materials of doors and windows Doors: Vertical plank? Oversized metal hardware? Windows: Casement? Double Hung? Number of panes?*				
Condition *Describe any deficiencies including condition of coatings loose glazing on windows, evidence of rot, sagging or other operating condition issues*				
Roof		Good	Fair	Poor
Type *Describe roofing, including material, thickness, exposure, installation pattern, number of layers, special features such as treatment of ridges. Describe underside of roof, including solid or skipped sheathing, spacing of sheathing, size and type of rafters*				
Condition *Describe any deficiencies including evidence of curling or splitting shingles, moisture penetration, duff build up, etc.*				

Metal & Other Exterior Components		Good	Fair	Poor
Type *Describe any other exterior components, including metal stove parts, etc.*				
Condition *Describe any deficiencies including evidence of missing or broken metal parts, rusted or corroded metal, etc.*				
Interior				
Walls, floors and ceilings				
Type: *Note: Checklist is primarily intended for small structures that may not have a true interior. For those that do, such as comfort stations and cabins, attach additional sheets as needed.* *Describe interior walls, ceilings, floors, lighting*				
Condition *Describe any deficiencies, signs of moisture damage, condition of coatings, cracks, etc.*				
Other interior features				
Type & Condition *Describe other interior features such as cabinets, counters, electrical fixtures, plumbing, etc.*				
Attach additional sheets to include sketches of structure details, descriptions of components not listed on the form, etc.				

Historic Integrity

The evaluation of the historic integrity of a structure is accomplished by comparing the existing form and detailing to the form and detailing of the structure as it was originally built or as it was during the structure's period of significance. The phrase "period of significance" refers to the span of time in which a property attained the significance for which it meets the criteria for the National Register of Historic Places. In the case of park structures built by the CCC, the historic significance is generally based on their association with the CCC and their embodiment of the principles of Rustic design. The period of significance will, therefore, in most cases be the period immediately after they were constructed. The first step in evaluating historic integrity is conducting research to determine how the building or structure was originally constructed and what alterations may have occurred.

While CCC built structures generally have a very informal appearance, they were almost always built according to approved plans and specifications. These plans can often be found in park files, state archives or in the CCC records in the national archives. Early photographs are a good source of information as well, both as a substitute for plans that cannot be located or as confirmation that a structure was built as shown on plans. Since the CCC was a government program, a number of publications were produced by both the federal and state government to report accomplishments and encourage continued political support for the program (see Figure 16). These documents can be a good source for early photos. Maintenance records should also be researched, including any records that may have been archived.

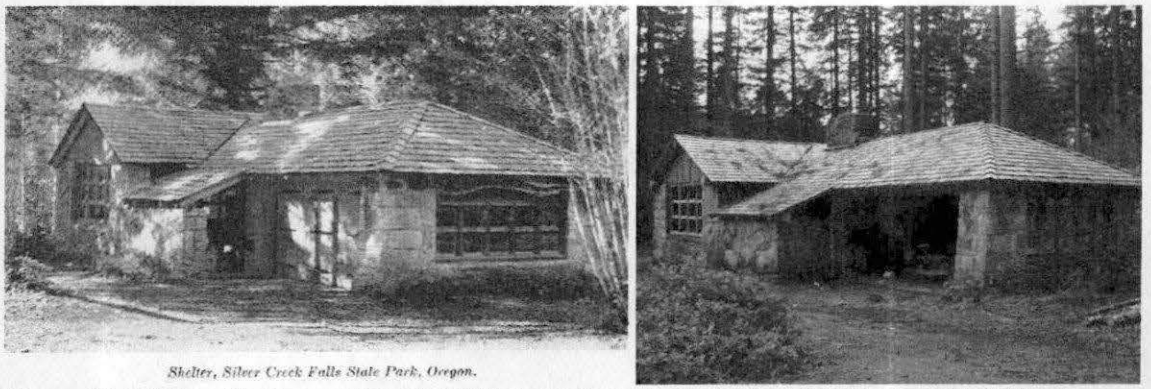


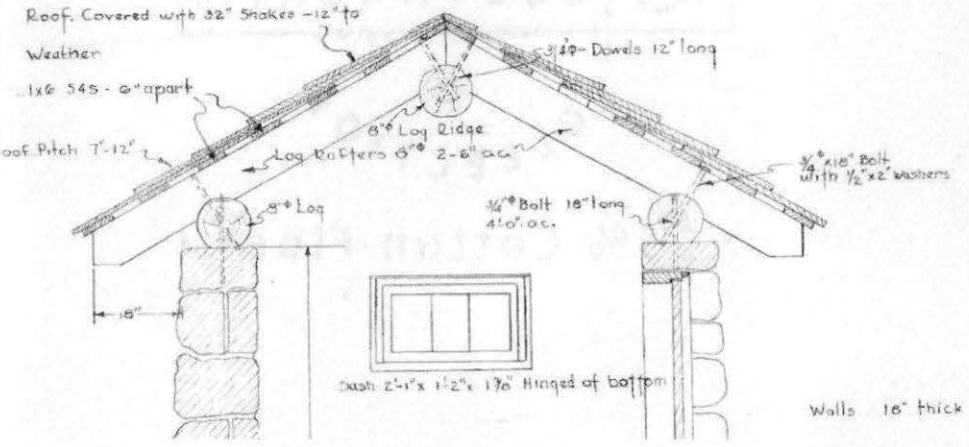
Figure 16. Kitchen Shelter at Silver Falls State Park as shown in the 1937 *National Park Service Yearbook Park and Recreation Progress* (on left) and in 2005(on right).

Buildings and structures themselves are often the best record of their own history. Initial evaluation of a structure should include looking for clues to alterations that may have occurred. Some clues may be fairly obvious, like windows that have been boarded up or filled in with materials that don't match the surrounding walls. Other clues may be less obvious to an untrained observer, but are more apparent when the basic design principles used for Rustic style structures are considered. Composition roofing, for example, is inconsistent with the basic Rustic design principle of using native materials like wood shakes. Regardless of the type of roofing currently present, the original roofing material has most likely been replaced and research must be done to determine the original roofing materials and installation details.

The underside of the roof should be inspected to see if there is evidence of what the original roof may have been. Such evidence might include skipped sheathing that has been left in place or even wood shakes that were simply covered up but not removed. Skipped sheathing provides evidence not only that the original roof may have been wood

shakes, but the spacing of the sheathing can be an indication of the size and exposure of the original shakes.

The pump house at Honeyman State Park provides a good example of a building feature in good condition, but with only fair historic integrity (see Figure 17). The roof has been recently replaced with a wood shake roof, which is the type of roofing specified in the original plans. The plans, however, show log structural elements for the roof, while the current roof is framed with dimensional lumber.



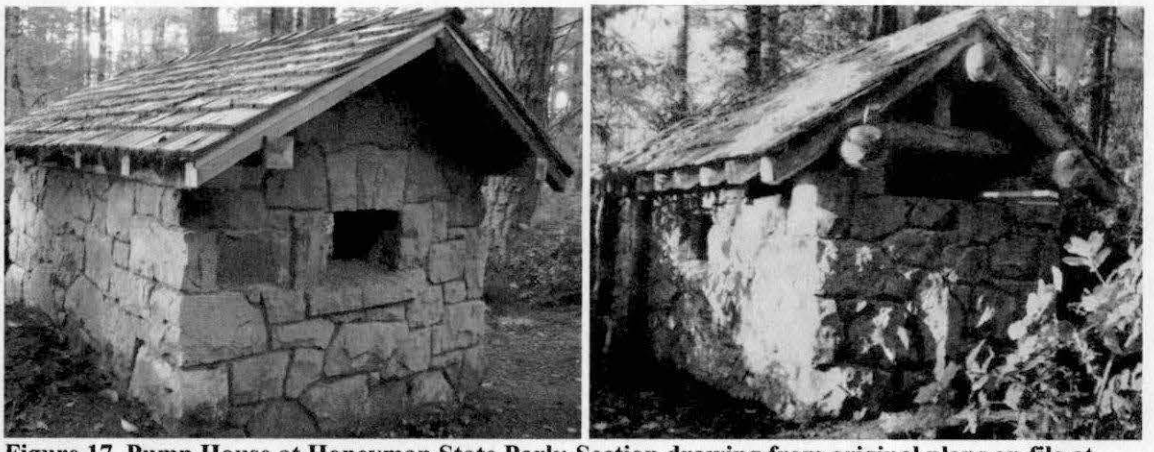


Figure 17. Pump House at Honeyman State Park: Section drawing from original plans on file at Oregon State Park main office (top), in 2005 (lower right) and a 1938 photo of a comfort station in the park, reprinted from *Park and Recreation Structures*.

Additional research was conducted to determine if the design shown on the plans was actually carried out. Early photos found of similar structures in the park indicate that the treatment shown on the plans was typical the way structures were built in the park, so it seems likely this roof structure was originally log.

Initial visual assessment of another structure at Honeyman State Park, the hexagonal kitchen shelter shown in Figure 18, revealed inconsistency with Rustic design principles that also warranted further research. In 2005 the roof was covered with composition shingles rather than natural materials like wood shakes and the log posts were resting on concrete piers, a material not generally used so prominently in Rustic structures. There were no roof overhangs and log rafter tails were cut straight across at the edge of the roof plane, rather than projecting and beveled like other structures in the park. Research confirmed that these details were alterations to the structure, which originally was constructed with full length log posts, one foot wide overhangs and projecting, beveled rafter tails.

Figure 18. ***Hexagonal Shelter, Honeyman State Park, 2005***

Character Defining Features

One of the most important concepts in planning the preservation or restoration[64] of a historic structure is understanding the character defining features of the structure. Character defining features are the qualities of a building that contribute to its visual character. These qualities range from the overall shape of the structure to details like the type of materials used and the visual evidence of craft methods used. The National Park Service publication *Preservation Brief 17 Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character* provides a detailed description of the concept of character defining features.[65] The following checklist, adapted from one found in Preservation Brief 17, can be used as a tool in identifying the character defining features of park structures.

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[64] The difference between these terms will be discussed in the next chapter

[65] Preservation Briefs are available as individual brochures, or online at www.cr.nps.gov/hps/tps/briefs/presbhom.htm or as chapters in United States. Department of the Interior., *The Preservation of Historic Architecture* (Guilford: The Lyons Press, 2004).

Park Rustic Style
Character Defining Feature Checklist[66]

1. **Setting**
What aspects of the setting are important to the character of the building? Is it sited to take advantage of a view? Is the structure intentionally obscured by vegetation? Are there plantings, terracing or walkways that contribute to the setting?

2. **Shape**
What is there about the form or shape of the building that gives the building its identity? Is it symmetrical? Rectangular? Is the emphasis vertical or horizontal?

3. **Roof and Roof Features**
Does the roof shape and pitch contribute to its character? Do the roofing materials provide color, patterns or textures that contribute to the structure's character? Does the roof have exposed structural members like purlins or rafter tails (see #4 below)?

4. **Projections**
Are there parts of the structures that project out, like porches, chimneys or wide roof overhangs? Are the projections supported by character defining elements like heavy timber or log knee braces or projecting purlins?

5. **Openings**
Is there a rhythm or pattern to the arrangement of the openings in the walls? Are there distinctive openings like stone arches or heavy timber lintels? Are the patterns in the windows and doors, like divided lights in the sashes or vertical planks in the doors? Is there distinctive door or window hardware, like oversized metal strap hinges?

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[66] Adapted from a checklist found in *Preservation Brief 17 Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character* by Lee Nelson

6. **Trim and Secondary Features**
Is there trim around windows and doors or on the walls that contributes to the character of the building? Are there secondary features such as shutters or porch railings? Are there metal components like camp stove grates, etc.?

7. **Materials**
Do the materials or combination of materials contribute to the overall character of the building when viewed from a distance? Were native materials used to make the building or structure blend in with the natural environment? Do the materials have a color or texture that contributes to the character of the structure?

8. **Craft Details - Wood**
How does the craftsmanship used in constructing the building contribute to its character? Does wood roofing or siding have the texture split shakes or sawn shingles? Are the shakes or shingles installed in straight rows or staggered? Are logs peeled or bark covered? Are they knotty and irregularly shaped? Are timbers rough cut or smooth? Do the materials have a clear natural finish or are they painted?

9. **Craft Details – Stone**
Is the stone rough rubble or more refined ashlar? Are the mortar joints narrow and recessed? What is the relative size of the stone? Is there a variation in sizes, such as larger stones at the bottom and smaller ones at the top?

CHAPTER VI
RECOMMENDED TREATMENTS

...it is better to preserve than to restore and to restore than to reconstruct.

A.N. Didron, French Archaeologist, 1834[67]

After the condition and historic integrity of structures have been assessed, a treatment plan can be developed. The first step in developing a treatment plan is to decide which issues to address. Issues related to condition will almost always need to be addressed, including correcting any factors that are contributing to the deterioration of the structure. Issues related to integrity are often more complex. Decisions need to be made as to whether to reverse alterations to the structure by removing material that has been added and/or replacing material that has been lost. The Secretary of the Interior's Standards for the Treatment of Historic Properties provide guidance for that decision making process. Once those decisions have been made, a treatment plan can be developed to address methods for implementation of those decisions.

The Secretary of the Interior's Standards

The Secretary of the Interior's Standards for the Treatment of Historic Properties were initially developed to provide guidance in the treatment of historic properties when

[67]Quoted in William Murtagh, *Keeping Time* (New York: John Wiley and Sons, Inc., 1997), 18.

federal funding was involved. The standards are mandatory for certain projects with federal involvement, but provide a useful framework for determining appropriate treatment even in cases where adherence to the standards is not required.

The Standards address four approaches to treatment of historic structures; preservation, rehabilitation, restoration and reconstruction. These approaches are defined as follows.

> *"Preservation* is defined as the act or process of applying measures necessary to sustain the existing form, integrity and materials of an historic property".[68]
>
> *"Rehabilitation* is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."[69]
>
> *"Restoration* is defined as the act or process of accurately depicting the form, features and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period."[70]
>
> *"Reconstruction* is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure or object for the purpose of replicating its appearance at a specific period of time and in its historic location."[71]

All four approaches emphasize the need to identify, retain and preserve the character defining features of the historic structure, as defined in chapter four. Of the four

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[68] Kay D. Weeks and Anne Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* (Washington: Hertitage Preservation Services, 1995), 17.

[69] Ibid.,61.

[70] Ibid.,117.

[71] Ibid.,165.

treatments, the *preservation* approach retains the greatest amount of historic fabric. This includes not only retaining original features, but also recognizing and retaining alterations to the building or structures form, features and detailing that provide a record of how the building or structure has evolved over time. The *rehabilitation* approach allows for some alterations to the structure to allow the building or structure to meet new or continued uses, while retaining the essential historic character. *Restoration* focuses on returning the building or structure to the appearance it had during its historic period of significance. To achieve this, the form, features and detailing dating to the period of significance are preserved, while later alterations are removed. *Restoration* treatment involves recreating a building or structure that no longer exists, and therefore involves use of new materials rather than retention of historic fabric.[72]

The Secretary of the Interior's Standards apply to a variety of resource types, including buildings, structures, objects, sites, districts and landscapes. In addition to the Standards, guidelines have been developed for each of the resource types to provide a framework for applying the standards. The guidelines provide examples of treatments that would be recommended or not recommended under each of the treatment approaches.[73]

There are a number of factors to consider when deciding which treatment approach is most appropriate for a particular structure. One consideration would be the relative

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[72] Ibid.,2

[73] The Standards for the each of the four treatment approaches are included in Appendix A. The complete Standards with guidelines for each resource type are available on the NPS website. The Standards with guidelines for historic buildings can be found at http://www.cr.nps.gov/hps/tps/standguide/index.htm

historical importance of the structure. A structure that has been designated as a National Historic Landmark would be likely to be a good candidate for preservation or restoration, while a contributing structure in a historic district might be more likely to be a candidate for rehabilitation. For a significant structure, a factor in deciding between a preservation or restoration approach might be the duration of the period of significance. For a structure with historic significance tied to a specific event, restoring the structure to its appearance on that date might be appropriate. If on the other hand a structure is significant as the oldest continuously operating ski lodge in the state, a preservation approach could be most appropriate. This would allow retaining alterations to the building in order to tell the story of how the buildings form had evolved over time in order to maintain its historic function.

The existing condition and historic integrity of a structure are also factors to consider in determining a treatment approach. A structure with all or most of its historic fabric intact and in reasonably good condition could be a good candidate for preservation, while one with a significant amount of historic fabric severely damaged or lost may be more appropriate for rehabilitation. The proposed use of the structure is another factor to consider. Generally it is best to allow a structure to continue to serve its historic function whenever possible, but in cases where the original function is no longer a viable use, the structure may need to be adapted to accommodate a new use. Adaptation may be required when continuing the historic function due to changes in how that function has evolved. Changes may also need to be made to meet changing requirements for building code

compliance, seismic stability or providing accessibility for people with disabilities. Such adaptations are generally best accommodated under a rehabilitation approach.

The Secretary of the Interior's standards recommend that where historic materials are severely damaged or missing, limited replacement "in kind" may be acceptable. In kind replacements should match the original in material, design, color and texture. For Rustic structures, the "quality of nativeness" (described in Chapter IV) is a key concept to consider in "in kind" replacements. The rustic character of materials used for these structures was part of the design intent, so it is important to not try to improve the structure by using more refined materials and detailing for repairs than the structure had historically. It is critical that careful attention to detail is used in selecting and installing in kind replacements. For example, a rough sawn timber should not be replaced with a smooth planed timber and the size should exactly match the component being replaced rather than using modern stock sizes.

Treatment Methods

Site

While treatment of historic landscapes is beyond the scope of this report, site conditions that are impacting the structure need to be addressed before repairing the damage caused by these conditions. In the example used in chapter five, the pump house at Honeyman State Park, poor drainage around the structure was causing moisture problems on the interior. In this case, regrading the slope at the rear of the structure to divert water away from the structure would be appropriate. Regrading should also be

done where soil has built up around wood structures, limiting or eliminating adequate clearance between the ground and the wood.

Vegetation noted in the initial assessment as negatively impacting the structure should also be corrected, while giving due consideration to the fact that it was the designers intent that vegetation be used as a means of subordinating the structure to the surrounding environment. It is not appropriate to clear away all vegetation, but selective thinning of vegetation near the building to increase sunlight and airflow around the structure can help reduce moisture problems. All vegetation should be kept properly trimmed so it is not touching the structure.

Roof

Wood shakes were the most commonly used roofing material on structures built by the CCC in the Northwest. Since the structures are now older than the normal life span for shake roofing, it is unlikely the original roofing remains intact. Many have been replaced with composition shingle roofs, which lack the texture and character of the historic materials. The use of native materials such as wood shakes is a character defining feature of these structures. Before replacing a roof, research should be done to determine the original roofing material and installation pattern and the new roof should match the original as closely as possible. As noted in the previous chapter, both the building itself and original construction documents or historic photographs may provide clues to appropriate replacement material.

Wood

One of the first steps in a log restoration project is determining which elements, or portions of elements, need to be repaired and which need to be replaced.[74] In all four treatment approaches described in the Secretary's Standards the goal generally is to retain as much of the original fabric as possible. Retaining original fabric preserves qualities replacements can not truly match such as original tool marks and species and quality of wood which may no longer be available. Log repairs can often be made with logs in place, in less time and at less cost than replacing the logs.[75] If logs must be replaced, they should be reused whenever possible by cutting out damaged sections and using the sound section of log in locations where shorter logs are needed.

Epoxy

One method repair in logs with relatively minor damage is the use of epoxies, which can be in the form of a liquid consolidant or putty type filler. Both forms consist of a resin and a hardener which are mixed just prior to use. Wood must be dry and decayed areas removed, and then the area is treated with a consolidant. Dry, rotted wood absorbs moisture rapidly, a factor that leads to accelerated deterioration in wood but also draws in the epoxy consolidant until it reaches solid wood, making the treatment more effective.

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[74] This section focuses on log work, since many CCC built park structures were constructed with logs. The basic concepts generally apply to other wood building components as well.

[75] Bruce D. Bomberger, "Preservation Brief 26: The Preservation and Repair of Historic Log Buildings," in *The Preservation of Historic Architecture*, ed. Dept. of the Interior (Guilford: The Lyons Press, 2004).

Once the consolidant has cured, the filler can be added. When the filler has dried, it can be worked with wood working tools.[76]

There are some drawbacks to using epoxies. Since Rustic style log and timber work typically is not painted or stained, epoxy patches can be difficult or impossible to conceal. Epoxies also are not good for use in areas where they will be exposed to excessive moisture because while the epoxy itself is moisture resistant, wood adjacent to the epoxy will tend to retain moisture. Moisture trapped between the epoxy and the wood can actually accelerate the deterioration of the wood.[77]

Partial Replacement

When portions of logs have become seriously deteriorated or have been removed, it is often possible to do a replacement of only the damaged section of a log. In fabricating replacement sections, careful study is required to ensure the replacement parts are historically accurate. Rotted wood will generally retain enough of its historic character to be used as a guide, but in situations where the original material is missing, original drawings and photos should be consulted when possible to make sure the replacement piece matches the original. It is important to avoid making assumptions about how a missing component may have looked. For example, while many Rustic Style buildings featured ax cut log ends, many were built with sawn ends. Careful research is required to determine appropriate material and craft details for replacement parts.

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[76] Ibid. p.295 and Harrison Goodall and Renee Friedman, *Log Structures: Preservation and Problem Solving* (Nashville: The American Association for State and Local History, 1980).

[77] Bomberger, "Preservation Brief 26: The Preservation and Repair of Historic Log Buildings,"295.

Damaged logs that have been removed may contain undamaged sections that can be a good source for replacement parts. If these are not available, logs that are the same species should be used whenever possible. The size and characteristics such as taper and the relative number of knots should be matched as closely as possible.

There are a number of ways to attach replacement sections. Often only the projecting ends of logs need to be replaced. In some cases depending in the design of the building, new rafter tails can be nailed in place with a simple straight cut where the rafters meet the walls without the repair being too obvious, as shown in Figure 19 at the bathhouse at Honeyman State Park.

Figure 19. Rafter tails on Honeyman State Park bathhouse replaced during rehabilitation with false rafter tails nailed to the exterior.

In the case of log crowns, ends can often be replaced at the notch. One method of attaching new log crown using epoxy and fiberglass reinforcing bar is shown in Figure 20 and described in great detail in Preservation Tech Note Exterior Woodwork number three, available online at http://www.cr.nps.gov/hps/tps/technotes/PTN28/Contents.htm . Rotted log ends are cut back to the center line of the wall (also the center of the notch)

and a hole drilled in the center of the remaining log and the center of the replacement crown. The holes are filled with epoxy, the reinforcing bar inserted and the log crown set in place.

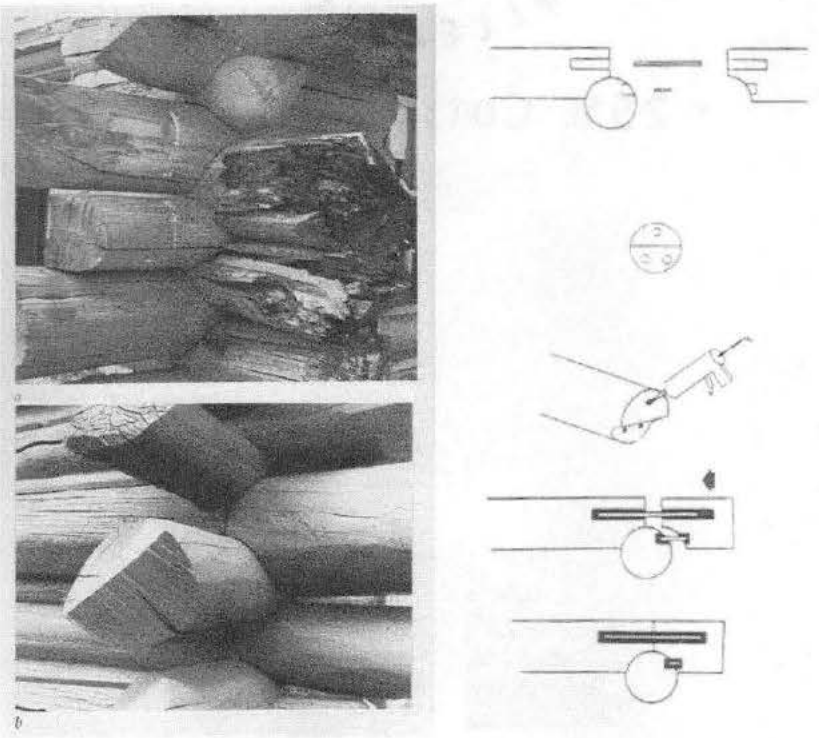

Figure 20. Log crown replacement, photos and drawing reprinted from Bomberger p. 294-295

Replacement sections can also be spliced in place using different types of joints, depending on the location of the splice. Two of the most common types are scarf joints and half lap joints. Scarf joints are made by simply cutting the ends of the sections to be joined at an angle and thus are easier to cut and fit, while half lap joints are stronger.[78] Figure 21 shows a half-lap joint in a log header at Silver Falls State Park in Oregon. This

[78] Goodall and Friedman, *Log Structures: Preservation and Problem Solving*,82.

joint is in a key structural component, making the half lap joint a more appropriate choice than a scarf joint.

Figure 21. Half-lap joint at restored kitchen shelter in Silver Falls State Park

Each year, the University of Oregon's Historic Preservation Program conducts the Pacific Northwest Preservation Field School. The field school is a partnership between the University of Oregon, the National Park Service and State Parks and State Historic Preservation Offices for Oregon, Washington and Idaho. The field school provides training in historic preservation theory and practice. Each year, the field school is held at a different site. The 2005 Field School was held at Jesse M. Honeyman Memorial State Park in Florence Oregon, on the Oregon coast. The hexagonal kitchen shelter at Cleawox Lake served as the primary hands on project as shown in Figure 22.

The rafter tails on the hexagonal kitchen shelter had been cut flush with the outer edge of the spandrel beam. Original plans showed the rafters originally extended one foot beyond the beam. Due to the exposed roof structure, it was determined that it was not feasible either structurally or aesthetically to splice rafter tails back on to the existing rafters. The rafters were replaced with log rafters carefully selected to match the

characteristics of the original rafters, including size, taper, and relative number of knots. Log posts supporting the roof structure had also been altered, with the lower portion of the posts replaced by concrete piers. The posts were also structurally and aesthetically not suitable for splicing of missing sections, so these were replaced in kind as well.

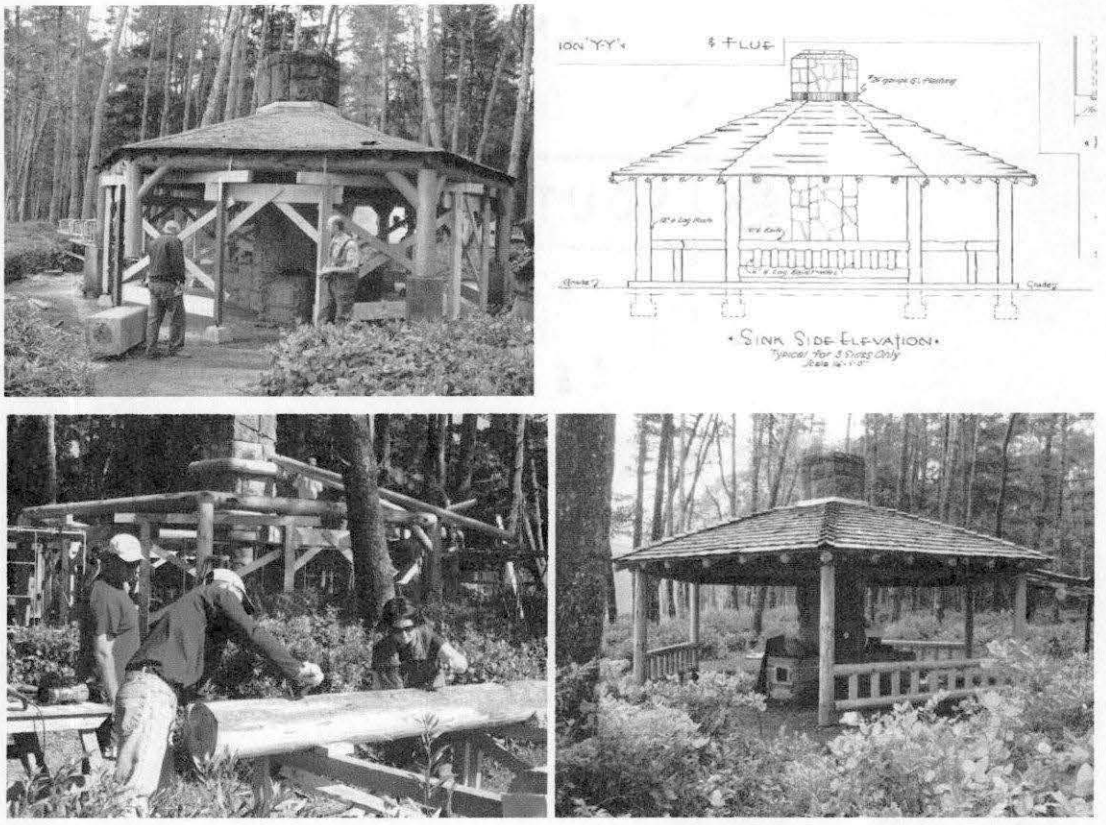

Figure 22. Hexagonal shelter at Honeyman State Park prior to rehabilitation (top left); elevation drawing in original plans (from Oregon State Park files) showing extended rafter tails and full length posts (top right); Field School students removing bark from replacement logs (bottom left); and with rehabilitation nearly complete (bottom right).

In situations where the original detailing of a structure leaves components prone to failure, in a rehabilitation of a structure it is sometimes acceptable to make changes to prevent future problems. Such changes should be made only after consulting with a historical architect. At Honeyman State Park, log posts supporting the roof originally

were set directly on the paved floor of the shelter, creating an avenue for moisture in the ground to be absorbed into the wood. It is likely that this led to rot and ultimately to the decision to cut off the lower portion of the post and replace it with concrete. To alleviate this problem in the future, the replacement posts were set on a metal plate (Figure 23) to provide a gap between the ground and the wood, with only a minor change from the historic appearance. Posts were bolted to the metal plate and wood plugs were installed to cover the bolts.

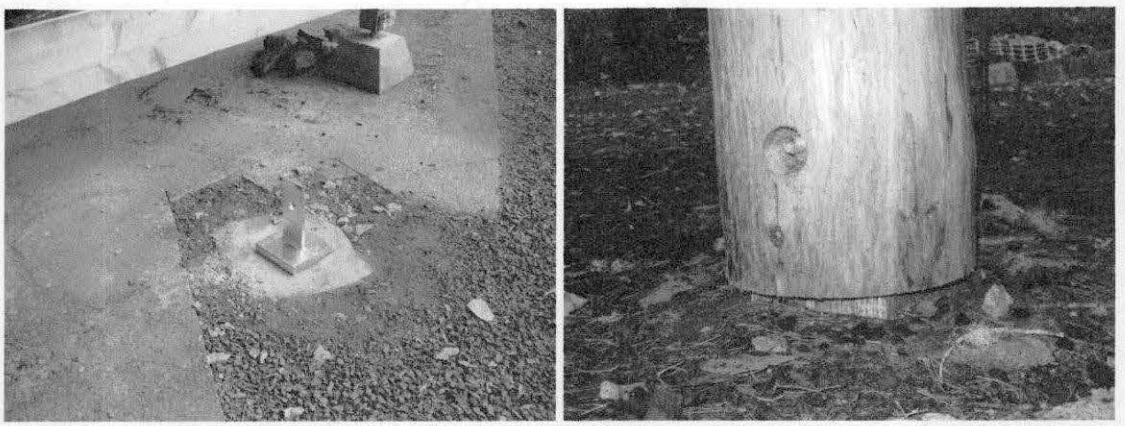

Figure 23. Honeyman State Park, metal plates provide a gap between the ground and replacement posts. The bolts were covered with wood plugs.

Preservatives

Wood should be treated with preservatives to protect it from pest and moisture damage. Wood on Rustic Style structures built by the CCC was often treated simply with boiled linseed oil. Other treatments can be used that may be more effective and require less frequent reapplication, but it is important that the type of preservative used does not affect the natural or historic appearance of the wood, either in color or gloss. One method of achieving this is the use of a mixture of boiled linseed oil, mineral spirits and paraffin wax. The treatment is brushed on and needs to be reapplied every two to three years.

Another preservative method is the use of Borate treatment. This method was used in preserving totem poles at Sitka National Park after a variety of other methods proved to be ineffective. Borate treatment has the advantage of being effective against brown rot and white rot fungi and most wood destroying insects. It is considered relatively safe for the environment. The main drawback is that it is water soluble and will leach out when exposed to moisture. For this reason, wood that is exposed to the weather would also need to be treated with a water repellant treatment.[79]

Although nearly always given a natural finish when first built by the CCC, many park structures have since been painted. If a painted structure is being rehabilitated or preserved, painting replacement wood sections may be acceptable. If the structure is being restored or reconstructed, research should be done to determine the original finish.

Stone

While stone can be repaired using epoxies or dutchman type repairs similar to those used in wood, in stonework on Rustic structures in most cases it is more appropriate to replace severely damaged or missing stones. Replacement stones should match the existing stone as closely as possible. Fortunately, in most cases the CCC quarried stone very close to the site where they were building, both for convenience and to ensure the harmony of the structure with its environment. Whenever possible, replacement stone should be taken from the same source. Replacement stones should be the same size and shape as those they are replacing.

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[79] Ron Sheetz and Charles Fisher, "Preservation Tech Notes Exterior Woodwork Number 4: Protecting Woodwork against Decay Using Borate Preservatives," ed. US Dept. of Interior National Park Service.

To enhance the harmony of the structure with the environment, CCC workers were instructed to set the stones with the weathered face of the stone exposed. This practice is even more important in repair work, as it helps the new stone blend in with the existing stones.

Care should be taken to ensure that any mortar used for repairs or repointing is compatible with the existing mortar and the stone. Analysis of an unweathered section of mortar can help identify a proper mortar mix to match the color, texture, permeability and hardness of the old mortar.[80] Mortars used by the CCC were typically quite hard. A training manual for CCC workers suggested a mortar mix of one part lime putty, one part Portland cement and six parts sand for work above grade or one cubic foot Portland cement, 1/10 cubic foot lime putty and three cubic feet of sand for damp locations.[81]

When repointing, the detailing of the mortar should also match the character of the historic mortar. Typically the mortar in rustic structures was deeply recessed to give the walls a more natural appearance.

Metal

Blacksmithing was one of the trades taught to CCC enrollees. Unfortunately, historic metal components of park structures are often missing due to either deterioration or removal. Metal was most commonly used for door and window hardware and for camp stoves. In addition to photos and drawings, other parks can be used as a source of

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[80] Preservation Brief 2, Repointing Mortar Joints in Historic Masonry Buildings is a good source of information and can be found at http://www.cr.nps.gov/hps/tps/briefs/brief02.htm.

[81] Guy Arthur, *Civilian Conservation Corps Project Training: Brick and Stone Work* (Washington: United States Department of the Interior, 1937), 3.

information regarding missing components. At Honeyman State Park, camp stoves had been filled in and most of the metal parts had been removed, as shown in Figure 24. The stoves were very similar to those in other parks in Oregon and in Washington. At the other parks, including Millersylvania State Park in Washington, more of the metal remained intact, providing an example to be followed for restoration of the stoves. In addition, Washington State Parks had had molds made to recast missing stove components.

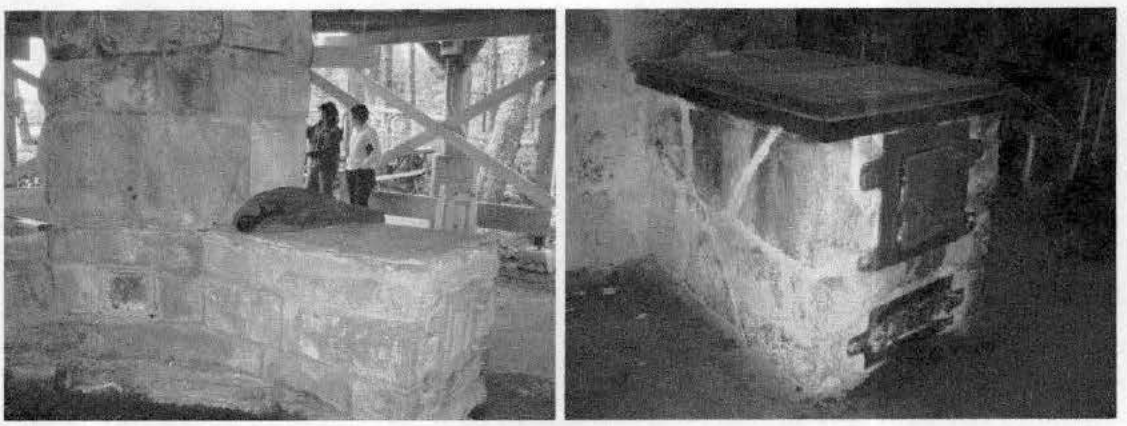

Figure 24. Camp stove at Honeyman State Park filled in with concrete (left) and at Millersylvania State Park with metal components intact (right)

Maintenance

Proper maintenance is critical to the preservation of Rustic Style park structures. The structures were built using native materials and intentionally allowed to age and weather in order to harmonize with the surrounding environment. A small amount of moss and lichen build up on stonework is acceptable, even desirable. This should be monitored however as excessive growth is can be an indicator of moisture problems. Proper maintenance is required to keep the weathering process from going too far.

Frequent light maintenance of the structure, such as brushing off duff build up and maintaining surrounding vegetation, reduces the threat of costly damage caused by moisture being trapped against the structure. It also helps avoid the build up of grime and heavy moss that would necessitate more aggressive cleaning methods that might reverse the desired aged and weathered look and potentially damage the historic materials.

Once a structure has been restored, a maintenance plan must be implemented to protect the investment that has been made in the structure. The plan should include frequent periodic monitoring of the structure so threats to the structure can be identified and corrected before damage is severe. Treatments used to protect the structures from moisture and pests must be reapplied on a regular basis, generally every couple of years depending on the type of preservative used.

Rustic park structures require a higher level of maintenance than structures that were built more recently and designed to be maintenance free. The aesthetic and historic value of Rustic structures makes them worthy of the extra effort required to care for them. This extra care is most cost effective when done properly as routine maintenance, rather than allowing structures to deteriorate to the point where more costly repairs are required.

Recommended vs. Not Recommended Treatments

Table 3, adapted from tables found in the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*, provides guidance in determining

appropriate treatments for Rustic Structures. The guidelines published with the Secretary's Standards provide more extensive recommendations and should be consulted when planning treatment of any historic structure, including Rustic structures. Table 3 is intended to summarize issues directly related to Rustic structures.

Table 3. Recommended vs. not recommended treatments. Adapted from *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings.*[82]

Recommended	Not Recommended
Site	
Correcting conditions that could lead to deterioration of structures, such as improper drainage or overgrown vegetation, without making changes that change the historic character of the landscape.	Failure to maintain proper site drainage to carry moisture away from structures Making changes to the landscape that diminish the historic character of the site
Limited Replacement in Kind	
Replacing historic material only when historic material is missing or extensively damaged. New work must match old in material, design, color, texture and workmanship that achieves the "quality of nativeness" and should be unobtrusively dated to guide future research and treatment.	Using replacement materials that do not match the historic materials, such as replacing logs with timbers, or rough sawn timbers with planed lumber.
Roof	
Identifying, retaining, and preserving roofs and their character defining features, including shape, overhangs, exposed rafter tails, roofing materials such as wood shakes, and installation patterns. Conducting careful research to determine historically accurate replacement material in cases where the original roofing material has been removed.	Replacing roofing with material that doesn't match the historic material or is inconsistent with Rustic design principles. Failing to periodically remove duff build up and manage vegetation, including trimming vegetation growing too close to the structure and removing damaged overhanging tree limbs to prevent them from falling on the structure
Wood	
Identifying, retaining, and preserving wood features that are important in defining the overall historic character of the building such as siding, log or timber brackets or purlins, and log railings. Applying chemical preservatives to wood features such as beam ends or outriggers that are exposed to decay hazards and are traditionally unpainted. Repairing, stabilizing, and conserving fragile wood using well-tested consolidants, when appropriate. Repairs should be physically and visually compatible and identifiable upon close inspection for future research. Repairing wood features by patching, piecing-in, or otherwise reinforcing the wood using recognized preservation methods.	Altering wood features which are important in defining the overall historic character of the building so that, as a result, the character is diminished. Failing to reapply preservative treatments as needed, or using treatments that change the historic character of the surface by not matching historic color or gloss. Failing to identify, evaluate, and treat the causes of wood deterioration, including faulty flashing, wood in close proximity to the ground, plant material growing too close to wood surfaces, or insect or fungus infestation.

[82] Weeks and Grimmer.

Recommended	Not Recommended
Wood, cont.	
The new work should be unobtrusively dated to guide future research and treatment.	Removing wood that could be stabilized and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile historic materials. Removing wood that could be repaired, using improper repair techniques, or failing to document the new work.
Stone	
Identifying, retaining, and preserving masonry features that are important in defining the overall historic character of the building or setting such as walls, paving, fountains, stoves and details such as tooling and bonding patterns, coatings, and color. Protecting and maintaining masonry by providing proper drainage so that water does not stand on flat, horizontal surfaces or pool against vertical surfaces. Repointing mortar joints as needed, using mortar that is compatible in strength, composition, color and texture. Using had tools to remove loose mortar without damaging adjacent stone. Duplicating joint profile when repointing mortar, for Rustic structures mortar is typically deeply recessed. When replacing damaged stones, set stone with the weathered face of the stone exposed.	Altering masonry features which are important in defining the overall historic character of the building so that, as a result, the character is diminished. Replacing historic masonry features instead of repairing or replacing only the deteriorated masonry. Failing to evaluate and treat the various causes of mortar joint deterioration such as leaking roofs or gutters, differential settlement of the building, capillary action, or extreme weather exposure. Using power tools to remove loose mortar. Repointing using incompatible mortar or detailing that does not match the original. Repointing a larger area than needed to repair deteriorated mortar.
Metal	
Identifying, retaining, and preserving metal features such as heavy strap door hinges and metal stove parts. Protect metals from corrosion by eliminating moisture exposure where possible or applying protective coatings as needed.	Failing to protect metals from corrosion that could damage not only the metal, but masonry or wood the metal is embedded in.
Maintenance	
Cleaning historic materials using gentlest means possible, and only when necessary to halt deterioration or remove heavy soiling. Following a schedule of frequent light cleaning, such as brushing off accumulated duff, to avoid heavy build up that would require more aggressive and damaging cleaning methods in the future.	Aggressively cleaning surfaces when they are not heavily soiled, thus needlessly introducing chemicals or moisture into historic materials and diminishing desired aged and weathered appearance.

CHAPTER VII

CONCLUSION

Park structures built by the Civilian Conservation Corps in the Pacific Northwest are easy to overlook. They typically are modest structures and, as their designers intended, blend in easily with the surrounding landscape. Their simple design and rough workmanship can make them seem crude and insignificant, when in fact they are very significant as the embodiment of both a distinct architectural style, the National Park Service Rustic Style, and of the labor of the largest peace time mobilization of workers in our nation's history, the Civilian Conservation Corps. In addition to their aesthetic qualities, their ties to these important historic movements make these structures worthy of preservation and respect.

The Rustic Style was more than just an architectural style, it was a design philosophy tied to the basic premise of what parks ought to be; places where the intent was to "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations."[83] The structures were designed to serve the needs of visitors to the park without detracting from or competing with the scenery the visitors had come to enjoy.

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[83] The purpose clause of the legislation creating the National Park Service, quoted in Runte, *National Parks*,104.

To achieve the basic Rustic design principle of subordination of structures to the landscape, structures were built with native materials and allowed to age and weather to blend in with the surrounding natural environment. One of the challenges facing those entrusted with the care of these structures today is the need to carefully monitor and maintain the structures to prevent the weathering process from going too far. In preserving historic structures, there is always a need for balance in maintaining structures while preserving the patina that becomes a valued characteristic of the structure. In Rustic park structures the patina was part of the design intent from the beginning, making this balance even more critical.

One of the keys to maintaining this balance is establishing a routine maintenance plan that includes frequent monitoring to identify problems early before historic fabric is damaged. Simple routine maintenance including vegetation management and light cleaning such as brushing off duff can prevent trapping of moisture against historic materials that would hasten deterioration of those materials. Preservative treatments must be reapplied at regular intervals. These simple steps are often overlooked due to budget constraints most parks operate under, but the budgetary implications of failure to maintain structures are far greater than the cost of proper routine maintenance. Rustic structures were not designed to be maintenance free; routine maintenance plans are critical to preventing the need for much more costly repairs in the future.

Another challenge is the need to appropriately repair or replace features damaged by earlier inappropriate alterations or neglect. Like many historic structures, both the craftsmanship and the materials used in building Rustic structures are not as common

today as they were when the structures were built. Fortunately, the skills required to make appropriate repairs are not that difficult to learn. The young men who enrolled the CCC had little if any job skills when they came into the program, yet with the on the job training they were given while they were building these structures, they were able to create the lasting legacy we still enjoy today. Current training programs like the Pacific Northwest Preservation Field School provide hands on training that can give today's workers the skills needed to repair these structures in much the same way the CCC enrollees learned to build them.

The park structures built by the CCC are a wonderful gift left to us by a past generation. Too often their intentionally unobtrusive style has made these structures easy to ignore, and too many of the structures have been lost or have fallen into disrepair. The structures that remain can and should be preserved, both as examples of the Park Rustic Style of architecture and as the lasting legacy of the Civilian Conservation Corps enrollees that built them.

APPENDIX A

THE SECRETARY OF THE INTERIOR'S STANDARDS

The Secretary of the Interior's Standards for **Preservation**

Preservation *is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code required work to make properties functional is appropriate within a preservation project.*

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.

2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

The Secretary of the Interior's Standards for **Rehabilitation**

Rehabilitation *is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.*

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The Secretary of the Interior's Standards for **Restoration**

Restoration *is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.*

1. A property will be used as it was historically or be given a new use which reflects the property's restoration period.

2. Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.

3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

4. Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.

6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.

7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.

8. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

9. Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

10. Designs that were never executed historically will not be constructed.

The Secretary of the Interior's Standards for **Reconstruction**

Reconstruction *is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.*

1. Reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the property.

2. Reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archeological investigation to identify and evaluate those features and artifacts which are essential to an accurate reconstruction. If such resources must be disturbed, mitigation measures will be undertaken.

3. Reconstruction will include measures to preserve any remaining historic materials, features, and spatial relationships.

4. Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed property will re-create the appearance of the non-surviving historic property in materials, design, color, and texture.

5. A reconstruction will be clearly identified as a contemporary re-creation.

6. Designs that were never executed historically will not be constructed.[84]

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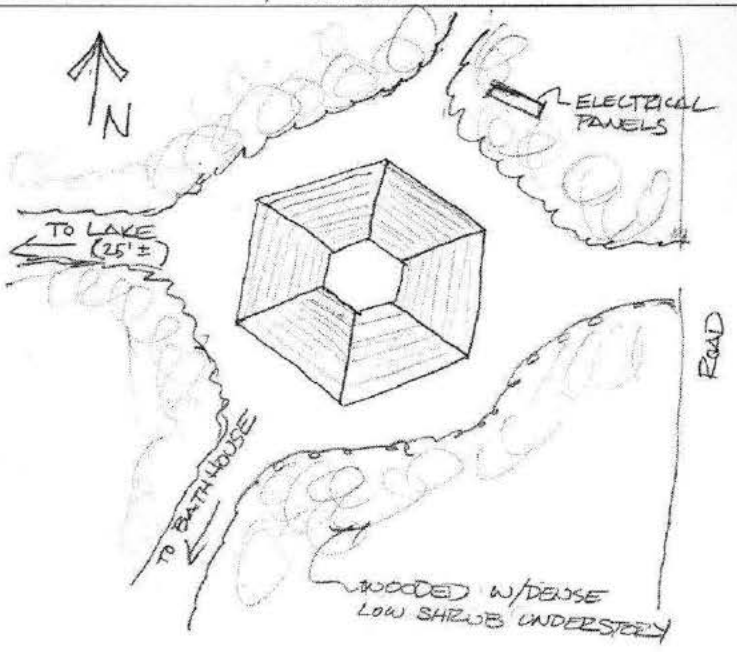
[84] Weeks and Grimmer.

APPENDIX B

SAMPLE ASSESSMENT FORM

Rustic Park Structure Assessment Checklist				
Identification				
Name/Type of Structure	HEXAGONAL KITCHEN SHELTER			
Description/Size *Brief description of overall form of structure, including dimensions of footprint*	OPEN SHELTER WITH HEXAGONAL PLAN, 14'-7" EACH SIDE MEDIUM PITCH HEXAGONAL HIP ROOF SUPPORTED BY LOG POSTS (10" DIA) ON CONC. PEIRS, LARGE CENTRAL STONE CHIMNEY WITH 3 RADIATING COOK-STOVES			
Location *Include name of park and location within park*	JESSE M. HONEYMAN STATE PARK FLORENCE OREGON ON CLEAR LAKE, NORTH OF BATH HOUSE			
Date of Inspection	1/15/05			
Weather on Inspection Date	OVERCAST, LIGHT RAIN			
Inspected by	SUSANN BROWN, SARAH HEIN			
Site Plan *Sketch site, include north arrow, location of major plants & trails, roof plan, direction of ground slope, adjacent features such as lighting and utilities*				
Assessment		Good	Fair	Poor
Site: Vegetation *Branches touching structure, overhanging limbs, roots undermining foundation, etc.*	WOODED SITE, TALL CONIFERS & DENSE LOW SHRUBS WELL MAINTAINED, NO IMMINENT THREATS, NO VEGETATION TOUCHING STRUCTURE	X		

Ground Slope/Drainage *Does the ground slope allow proper drainage? Is there evidence of ponding in or around the structure?*	FAIRLY LEVEL SITE WITH SOME PONDING PONDING ON PAVEMENT AT SOUTH SIDE OF COOK STOVE			X
Other site elements *Lighting, trails, utilities, etc.*	LARGE BANK OF ELECTRICAL PANELS 10' NE OF STRUCTURES, TRAILS TO LAKE, BATHHOUSE & PARKING		X	
Other site conditions *Bodies of water, prevailing winds, etc.*	CLEAWOX LAKE 25' WEST OF STRUCTURE WIND BLOWING ACROSS LAKE TOWARD STRUCTURE		X	
Foundation		Good	Fair	Poor
Type *Describe materials/ type of foundation*	OPEN STRUCTURE SUPPORTED BY LOG POSTS RESTING ON CONCRETE PEIRS. PEIRS 3'-4" HIGH 18" SQUARE, 14'-7" OC			X
Condition *Describe any deficiencies such as cracks, loose mortar, rotted wood, etc.*	PEIRS ARE SET AT ODD ANGLES, NOT LINED UP WITH OTHER BUILDING COMPONENTS MOSS AT BASE OF PEIRS, HEAVY ON WEST SIDE		X	
Stone				
Type *Describe other stone features, including walls and chimneys. Include type of stone, if known, relative size and character of stone (ashlar vs. rubble), character of mortar joints*	STONE COOKSTOVE AT CENTER, HEXAGONAL CHIMNEY EXTENDS THROUGH ROOF, 3 LOW PROJECTING COOKSTOVES. PITCH FACED ASHLAR, LARGE VARIED SIZE STONES, DEEP NARROW MORTAR JOINTS - HARD MORTAR STOVE TOPS CONCRETE WITH 220 OUTLET IN EACH PLYWOOD COVERED OPENING ON NORTH SIDE (2'X4'±)			
Condition *Describe any deficiencies such as cracks, loose or missing mortar, spalling, efflorescence, heavy moss growth*	FERNS GROWING IN CRACKS IN MORTAR ABOVE ROOF LINE COOKSTOVES INOPERABLE, ASH FILL VISIBLE THROUGH CRACKED CONCRETE TOP HEAVY MOSS ABOVE PONDING ON FLOOR MINOR SPALLING, SOME CRACKED MORTAR		X	

Exterior Wood Elements		Good	Fair	Poor
Posts/Structural Elements Type *Describe any wood structural elements, such as posts, purlins or other roof structure railings, etc. Are they log? Rough sawn timbers? Bevel cut ends? Do elements project beyond the roof plane? Are elements in close proximity to the ground?*	6 LOG POSTS, 10" DIA. SUPPORT ROOF STRUCTURE 9" LOG SPANDREL BEAMS AT PERIMETER, 7'-8" ABOVE FLOOR, LOG RIDGE BEAMS & RAFTERS EXPOSED RAFTERS 6" DIA. 30" OC, EXTEND 2" BEYOND SPANDREL BEAM, STRAIGHT CUT RAFTERS SUPPORTED AT TOP BY 3½"x12" LEDGER & 4" LOG ATTACHED TO CHIMNEY (SEE SKETCH) SOLID PLYWOOD ROOF SHEATHING, DIAGONAL LOG BRACES BETWEEN POSTS & BEAMS ALL WOOD PAINTED BEIGE			
Condition *Are any wood elements rotted? Focus on areas prone to rot, ie tops of horizontal surfaces exposed to weather including projecting purlins, elements close to ground.. Condition of coatings? Checking of logs or timbers? Moss or other plant growth?*	SE RIDGE BEAM ROTTED AT THE END ROOF SHEATHING BENT DOWN BETWEEN 3RD & 4TH RAFTERS, WEST SIDE 1' HOLE IN ROOF ON SW SIDE PEELING PAINT THROUGHOUT, ESPECIALLY WEST SIDE, BLACK TAR DRIPPING DOWN WEST POST CHECKING ON MOST BEAMS, UP TO ¼" GAPS			
Wood Siding				
Type *Describe siding, ie vertical board and batten, horizontal lap, log, etc. Include width of components*	NONE			
Condition *Describe any deficiencies including evidence of rot, warping, rodent holes, condition of coatings, etc. Focus on connections with masonry, proximity to soil*				

Windows and Doors		Good	Fair	Poor
Type *Describe style and materials of doors and windows* *Doors: Vertical plank? Oversized metal hardware?* *Windows: Casement? Double Hung? Number of panes?*	NONE			
Condition *Describe any deficiencies including condition of coatings, loose glazing on windows, evidence of rot, sagging or other operating condition issues*				
Roof		Good	Fair	Poor
Type *Describe roofing, including material, thickness, exposure, installation pattern, number of layers, special features such as treatment of ridges. Describe underside of roof, including solid or skipped sheathing, spacing of sheathing, size and type of rafters*	ROOF COVERED WITH BROWN COMPOSITION 3-TAB SHINGLES, SOLID SHEATHING & LOG RAFTERS (SEE WOOD STRUCTURE SECTION) METAL ~~RAF~~ FLASHING AT CHIMNEY			X
Condition *Describe any deficiencies including evidence of curling or splitting shingles, moisture penetration, duff build up, etc.*	DUFF BUILD UP & SMALL BRANCHES FALLEN ON ROOF, LIGHT MOSS 1" DIAMETER IRREGULAR HOLE THROUGH ROOF SURFACE RUST ON FLASHING			

Metal & Other Exterior Components		Good	Fair	Poor
Type *Describe any other exterior components, including metal stove parts, etc.*	METAL STOVE PARTS: METAL DOOR FRAMES PRESENT BUT DOORS ARE MISSING METAL PAINTED GRAY			
Condition *Describe any deficiencies including evidence of missing or broken metal parts, rusted or corroded metal, etc.*	DOORS MISSING, DAMPERS MISSING, METAL STOVE TOPS MISSING (REPLACED WITH CONC.) RUST SHOWING THROUGH PAINTED SURFACES			
Interior				
Walls, floors and ceilings				
Type: *Note: Checklist is primarily intended for small structures that may not have a true interior. For those that do, such as comfort stations and cabins, attach additional sheets as needed.* *Describe interior walls, ceilings, floors, lighting*	CONCRETE FLOOR			
Condition *Describe any deficiencies, signs of moisture damage, condition of coatings, cracks, etc.*	FLOOR SURFACE UNEVEN, PONDING AT SOUTH SIDE OF STOVE PAVEMENT COVERS 2½" OF STOVE DOOR FRAMES			X
Other interior features				
Type & Condition *Describe other interior features such as cabinets, counters, electrical fixtures, plumbing, etc.*	COUNTER & SINK ON NORTH SIDE, SINK BOARDED OVER & NOT FUNCTIONAL COUNTER 2'-10" HIGH, 12' LONG MADE OF 2½"X 11½" BOARDS ELECTRICAL BOX WITH 4 BREAKERS ON NORTH POST			
Attach additional sheets to include sketches of structure details, descriptions of components not listed on the form, etc.				

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