
National Park Service
Cultural Landscapes Inventory
2006



Apollinaris Spring
Yellowstone National Park

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Inventory Summary

The Cultural Landscapes Inventory Overview:

CLI General Information:

Purpose and Goals of the CLI

The Cultural Landscapes Inventory (CLI), a comprehensive inventory of all cultural landscapes in the national park system, is one of the most ambitious initiatives of the National Park Service (NPS) Park Cultural Landscapes Program. The CLI is an evaluated inventory of all landscapes having historical significance that are listed on or eligible for listing on the National Register of Historic Places, or are otherwise managed as cultural resources through a public planning process and in which the NPS has or plans to acquire any legal interest. The CLI identifies and documents each landscape's location, size, physical development, condition, landscape characteristics, character-defining features, as well as other valuable information useful to park management. Cultural landscapes become approved CLIs when concurrence with the findings is obtained from the park superintendent and all required data fields are entered into a national database. In addition, for landscapes that are not currently listed on the National Register and/or do not have adequate documentation, concurrence is required from the State Historic Preservation Officer or the Keeper of the National Register.

The CLI, like the List of Classified Structures, assists the NPS in its efforts to fulfill the identification and management requirements associated with Section 110(a) of the National Historic Preservation Act, National Park Service Management Policies (2006), and Director's Order #28: Cultural Resource Management. Since launching the CLI nationwide, the NPS, in response to the Government Performance and Results Act (GPRA), is required to report information that respond to NPS strategic plan accomplishments. Two GPRA goals are associated with the CLI: bringing certified cultural landscapes into good condition (Goal 1a7) and increasing the number of CLI records that have complete, accurate, and reliable information (Goal 1b2B).

Scope of the CLI

The information contained within the CLI is gathered from existing secondary sources found in park libraries and archives and at NPS regional offices and centers, as well as through on-site reconnaissance of the existing landscape. The baseline information collected provides a comprehensive look at the historical development and significance of the landscape, placing it in context of the site's overall significance. Documentation and analysis of the existing landscape identifies character-defining characteristics and features, and allows for an evaluation of the landscape's overall integrity and an assessment of the landscape's overall condition. The CLI also provides an illustrative site plan that indicates major features within the inventory unit. Unlike cultural landscape reports, the CLI does not provide management recommendations or

treatment guidelines for the cultural landscape.

Inventory Unit Description:

Apollinaris Spring, a naturalistically designed stone water feature with a terrace, was constructed in 1925 to provide access to a natural spring. It is a small designed historic landscape (1/2 acre) located adjacent to Yellowstone National Park's Grand Loop Road Historic District (48YE520) about five miles south of Indian Creek campground and about two and a half miles north of Obsidian Cliff. It is a cold, mineral-water spring that has been a stopping place for thirsty travelers since at least the 1880s. A picnic area and Obsidian Creek are across the road.

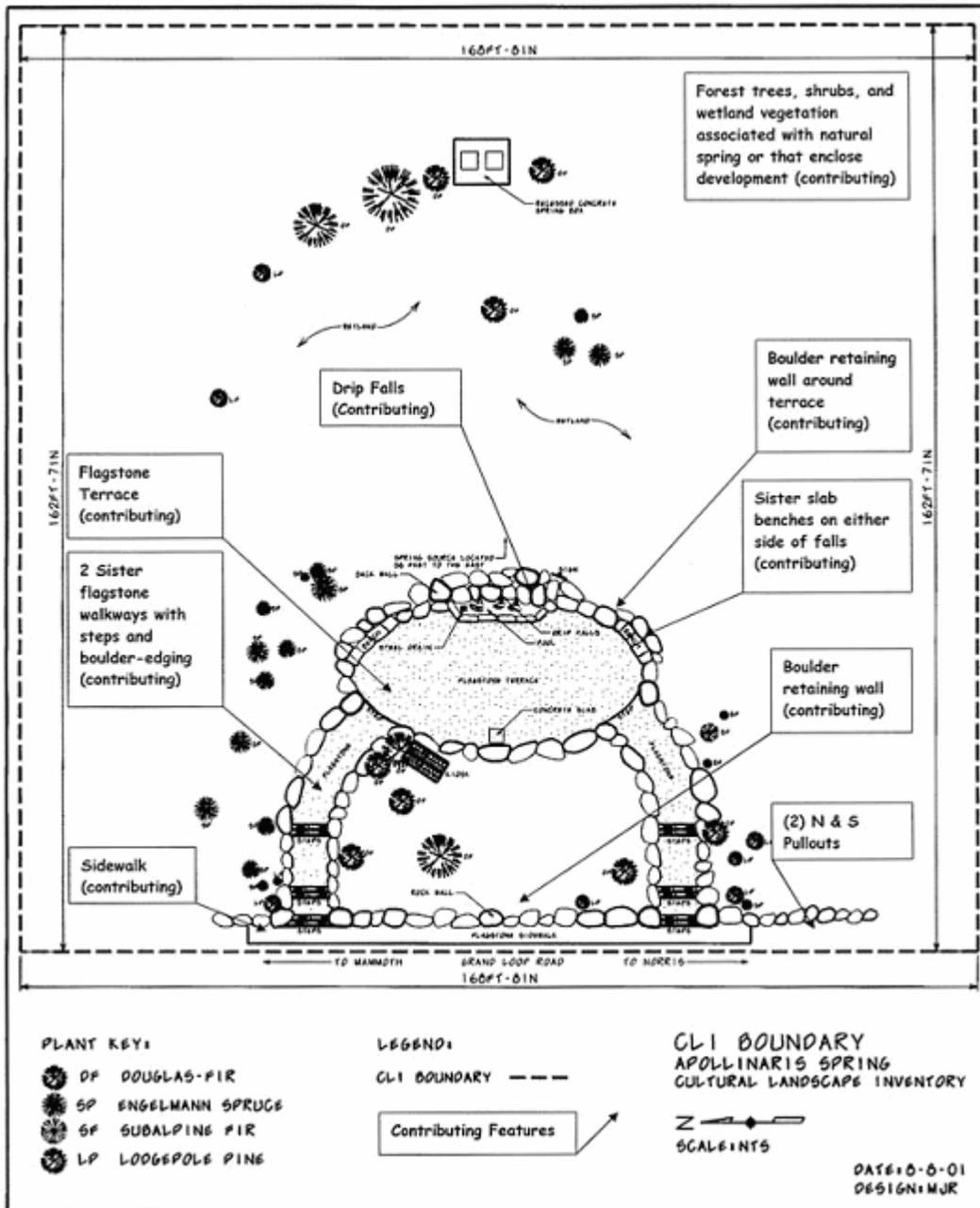
For decades, tourists traveling along the road stopped to partake of the calcium bicarbonate spring water. Native Americans used the water for medicinal purposes. D.R. Hull, chief landscape engineer for the National Park Service, recommended improving the appearance of the spring in 1922. Three years later, Hull directed the project with the collaboration of M.B. Hammon, sanitary engineer with the U.S. Public Health Service. Both men worked onsite; Hull planned the undertaking and designed the rockwork and Hammon designed the watercourses.

The Apollinaris Spring site consists of a leveled terrace several feet above and approximately 35 feet to the east of the Grand Loop Road (Mammoth Hot Spring to Norris Road). Adjoining the road is a stone-curbed walkway extending 89 feet in length. The three-foot-wide walkway is constructed of blocks of white travertine, 8 to 14 inches wide and 2- to 28 inches in length. Currently, the curb consists of a single row of stones, approximately 6 inches in height. Historic photographs show a second layer of stone, now obscured by layers of asphalt overlay that would have made the original curb about 12 inches high. A dry-laid, battered stone retaining wall borders the interior of the walkway. The wall is 106 feet long and 36 inches high. It is constructed of irregularly shaped and fitted, flat-faced basalt boulders ranging from 24 to 48 inches in size.

A pair of 6 feet 4 inch wide, symmetrical, gently curved stone walks with intermittently-place steps leads from the walkway to the terrace and the spring. Each walk consists of three sets of risers, with landings between. The steps are constructed of slabs of white travertine with irregularly shaped basalt boulders as copings on the sides. A single riser is located at the main terrace.

The oval-shaped terrace measures approximately 31 feet 6 inches by 25 feet 6 inches. It is paved with irregularly shaped flagstones varying in size from 18 to 48 inches in size. The stones are not mortared. A naturalistic rhyolite boulder retaining wall lines the terrace. On the west side, the wall is 18 inches high and consists of rough-cut rectangular stones 24 inches long and 18 inches thick. On the east side of the oval is the "drip fall," a raised wall of rhyolite boulders, approximately 13 feet 9 inches wide and 4 feet 6 inches high. Four tubes hidden in the wall throw water forward into a recessed concrete trough in front of the wall. The raised backwall is flanked by 16-foot-long stone seats constructed of travertine slabs over rhyolite boulders and integrated into the retaining wall.

Site Plan



Site plan, boundary, and contributing features: Apollinaris Spring (YELL graphic).

Property Level and CLI Numbers

Inventory Unit Name:	Apollinaris Spring
Property Level:	Component Landscape
CLI Identification Number:	890064
Parent Landscape:	890220

Park Information

Park Name and Alpha Code:	Yellowstone National Park -YELL
Park Organization Code:	1570
Park Administrative Unit:	Yellowstone National Park

CLI Hierarchy Description

The Apollinaris Spring site was constructed in 1925, and consists of the stone masonry on the east side of the Grand Loop Road. It is a component landscape to Yellowstone National Park, its parent landscape

Concurrence Status

Inventory Status: Complete

Completion Status Explanatory Narrative:

The CLI was initially started in 2001, and was completed in 2006 by YELL park staff members, Lon Johnson, Matthew Regnier, and Zehra Osman. Data entry: Michele Curran

Concurrence Status:

Park Superintendent Concurrence:	Yes
Park Superintendent Date of Concurrence:	04/11/2006
National Register Concurrence:	Eligible -- SHPO Consensus Determination
Date of Concurrence Determination:	04/19/2006

Concurrence Graphic Information:

Apollinaris Spring
Yellowstone National Park

ARTS. PARKS. HISTORY.

Wyoming Department of State Parks and Cultural Resources

WYOMING STATE HISTORIC PRESERVATION OFFICE
BARRETT BUILDING, 2301 CENTRAL AVE, CHEYENNE, WY 82002
(307) 777-7697

RECEIVED

APR 24 2006

April 19, 2006

SUPERINTENDENT'S OFFICE

Suzanne Lewis, Superintendent
Yellowstone National Park
P.O. Box 168
Yellowstone NP, WY 82190

RE: Determination of Eligibility on the Apollinaris Spring Cultural Landscape and
Determination of Effects on the Masonry Preservation Plan for Apollinaris Spring
(SHPO File # 0406AKY001)

Dear Ms. Lewis:

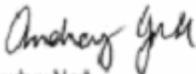
Thank you for consulting with the Wyoming State Historic Preservation Office (SHPO) regarding the above referenced project. We have reviewed the project report and find the documentation meets the Secretary of the Interior's Standards for Archaeology and Historic Preservation (48 FR 44716-42). We concur with your finding that the Apollinaris Spring (48YE1672) is eligible for listing on the National Register of Historic Places under the existing 1995 Multiple Property Documentation for "Historic Park Landscapes in National and State Parks." We also concur with your finding that no historic properties, as defined in 36 CFR § 800.16(j)(1), will be adversely affected by the Masonry Preservation Plan as proposed. In addition, we recommend that the prehistoric site (48YE357) be referenced in the National Register nomination form.

We recommend the National Park Service allow the project to proceed in accordance with state and federal laws subject to the following stipulation:

If any cultural materials are discovered during construction, work in the area shall halt immediately, the federal agency must be contacted, and the materials evaluated by an archaeologist or historian meeting the Secretary of the Interior's Professional Qualification Standards (48 FR 22716, Sept. 1983).

This letter should be retained in your files as documentation of a SHPO concurrence on your finding of no historic properties adversely affected. Please refer to SHPO project #0406AKY001 on any future correspondence regarding this project. If you have any questions, please contact me at 307-777-6337.

Sincerely,



Audrey York
Historic Preservation Specialist

WY SHPO concurrence on the Apollinaris Spring CLI, 4/19/2006.



IN REPLY REFER TO

H4217(YELL)

APR 11 2006

United States Department of the Interior

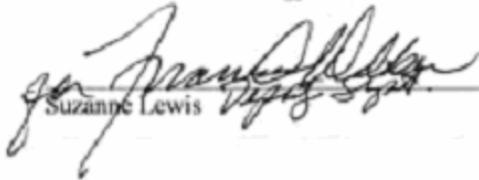
NATIONAL PARK SERVICE
PO Box 168
Yellowstone National Park
Wyoming 82190

Memorandum

To: Director, Intermountain Region, Cultural Resources
From: Superintendent, Yellowstone National Park
Subject: Apollinaris Spring, Cultural Landscape Inventory (CLI)

I hereby concur with the content and the assessment of the cultural landscape for the Apollinaris Spring.

1. The CLI identifies the Apollinaris Spring as a "Historic Designed Landscape," (in the Chronology and History section of the CLI database).
2. The CLI rates the condition as "Fair" (in the Condition section of the CLI database) and the Management Category is listed as "Should be Preserved and Maintained" (in the Management Information section of the database).
3. The period of significance for the Apollinaris Spring is 1925 for Criterion A and Criterion C (in National Register section in the CLI database).
4. The contributing features that are listed in the "Analysis and Evaluation" section in the CLI database.


Suzanne Lewis


Date

YELL Superintendent concurrence on the Apollinaris Spring CLI, 4/11/2006.

Data Collection Date: 01/15/2006

Recorder: Lon Johnson, Matthew Regnier, and Zehra C

Data Entry Date: 05/11/2006

Recorder: Lon Johnson, Matthew Regnier, and Zehra C

Geographic Information & Location Map

Inventory Unit Boundary Description:

The site has a rectangular boundary that begins at the edge of the Grand Loop Road Historic District, and extends east to include the spring box, and the vegetation surrounding it. Beginning at the southwest

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corner of the flagstone sidewalk, measure a distance of 40 feet southward. At that point measure 162 feet 7 inches at a 90-degree angle due east. At that point measure 168 feet 8 inches at a 90-degree angle due north. Then measure 162 feet 7 inches at a 90-degree angle due west. Join the rectangle by measuring 128-feet 8 inches southward.

State and County:

State: WY

County: Park County

Size (Acres): 0.50

Boundary UTMS:

Source: USGS Map 1:62,500

Type of Point: Point

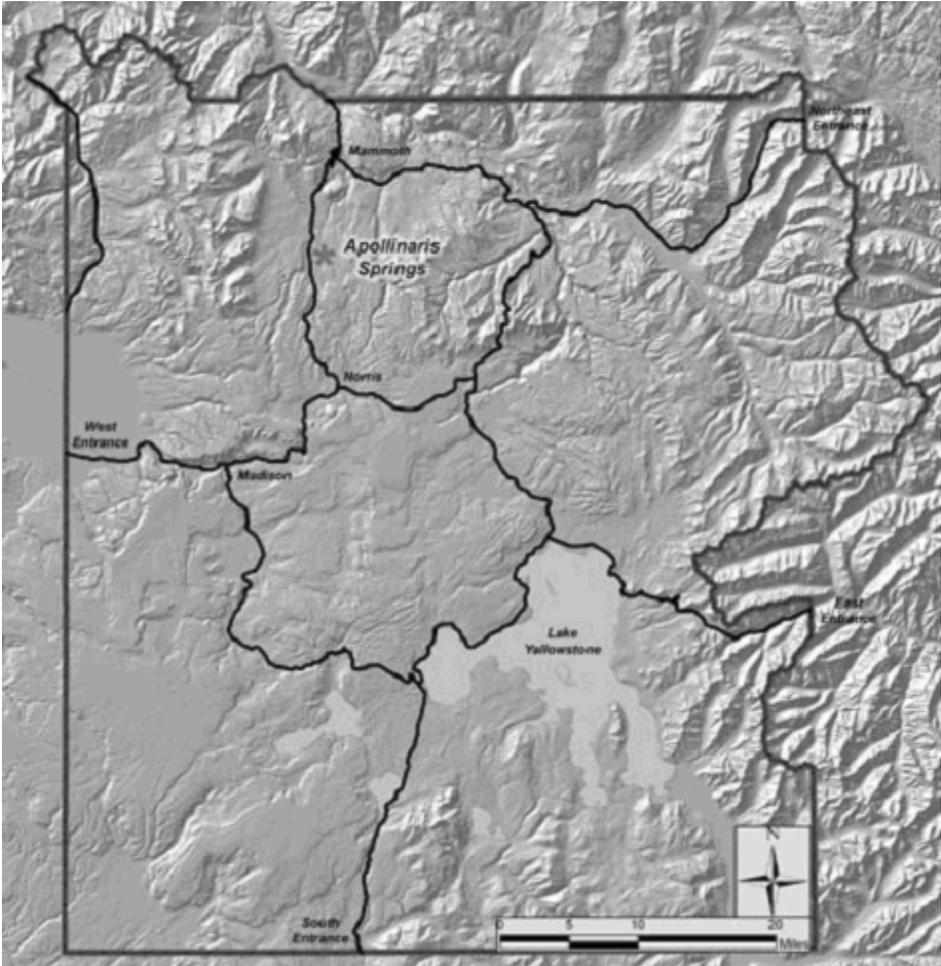
Datum: NAD 83

UTM Zone: 12

UTM Easting: 521,133

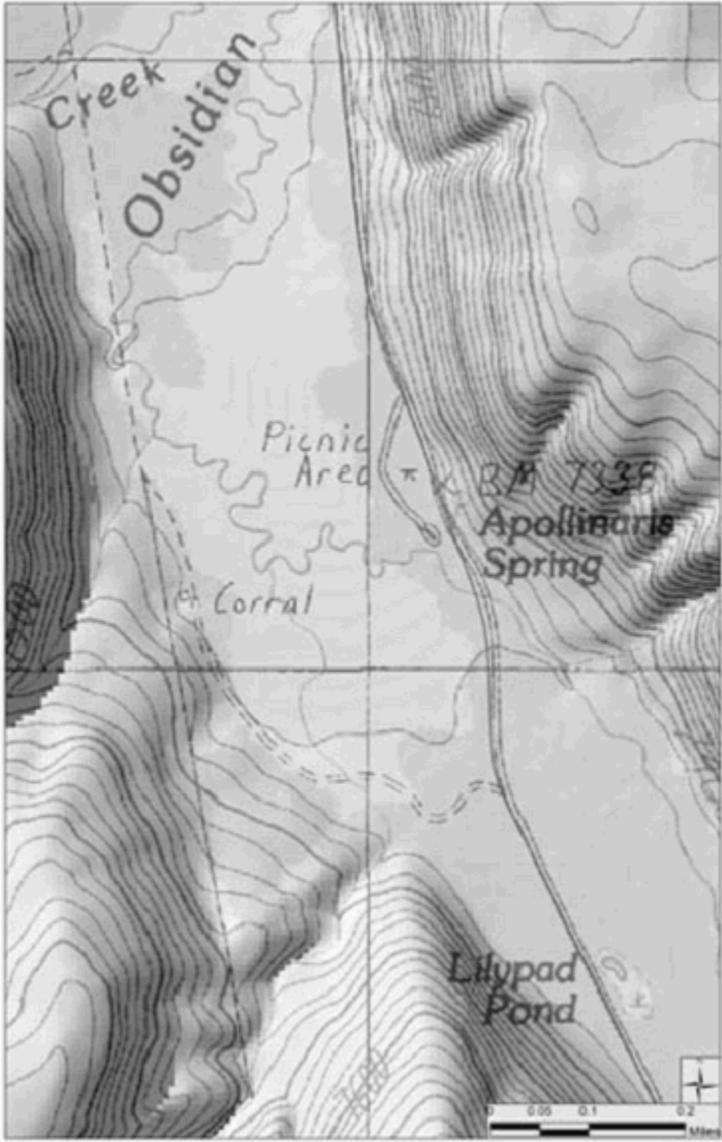
UTM Northing: 4,965,288

Location Map:



Yellowstone National Park, Wyoming.

Apollinaris Spring
Yellowstone National Park



USGS 7.5 Minute Quad.

Management Unit: N/A

Management Information

General Management Information

Management Category: Should be Preserved and Maintained

Management Category Date: 03/31/2006

Management Category Explanatory Narrative:

Superintendent concurrence 4/11/2006.

NPS Legal Interest:

Type of Interest: Fee Simple

Public Access:

Type of Access: Unrestricted

Adjacent Lands Information

Do Adjacent Lands Contribute? Undetermined

National Register Information

Existing National Register Status

National Register Landscape Documentation:

SHPO Documented

National Register Explanatory Narrative:

The NR nomination has not been written for Apollinaris Spring as of 5/2006.

National Register Eligibility

National Register Concurrence: Eligible -- SHPO Consensus Determination

Contributing/Individual: Individual

National Register Classification: Site

Significance Level: National

Significance Criteria: A - Associated with events significant to broad patterns of our history

Significance Criteria: C - Embodies distinctive construction, work of master, or high artistic values

Period of Significance:

Time Period: AD 1925

Historic Context Theme: Expressing Cultural Values

Subtheme: Architecture

Facet: Rustic Architecture

Time Period: AD 1925

Historic Context Theme: Expressing Cultural Values

Subtheme: Landscape Architecture

Facet: Protection Of Natural And Cultural Resources

Area of Significance:

Area of Significance Category: Landscape Architecture

Area of Significance Category: Conservation

Statement of Significance:

A natural spring, developed with masonry in 1925, Apollinaris Spring is significant because it represents one of the earliest National Park Service (NPS) landscape developments that used rustic-style stone masonry rather than wooden stairways, ramps and decks. The masonry style utilized native stone of specific texture and color that was blended into the surrounding landscape using naturalistic rock placement and naturalistic landscaping using native plants. Apollinaris Spring was a model for other NPS-wide masonry projects; especially other spring developments.

Apollinaris Spring, a historic designed landscape, is eligible for listing in the National Register of Historic Places under Criteria A and C at a national level of significance. The spring is recommended as a member of the “Historic Park Landscapes in National and State Parks” Multiple Property Documentation prepared by Linda Flint McClelland in 1995. It’s period of significance is 1925; the year of construction.

National Significance

The Multiple Property Document for “Historic Park Landscapes in National and State Parks” requires that for park landscapes to be nationally significant, they must have been “pivotal in introducing and advancing the principles and practices of national park landscape design and [maintain] a high degree of artistic quality and historic integrity.” The context prepared for the MPD provides documentation of Apollinaris Spring’s precedent setting contribution to national park landscape design. In this MPD, NPS developments were modeled after the 1925 rehabilitation of Apollinaris Spring: the rustic stonework used at the overlooks at the Grand Canyon of the Yellowstone during the 1930s (McClelland, 1998, 234); the 1930s CCC work for spring rehabilitation at Yosemite National Park (McClelland, 1998, 371); and the NPS-wide use of plantings to blend man-made developments into the surrounding landscape (MPD, 1995, 94).

Criterion A: Events

Under Criterion A, Apollinaris Spring meets the registration requirements in the Multiple Property Documentation that 1) properties be associated with the twentieth-century movement to develop national parks for public enjoyment and that 2) it reflects the practices of park landscape design developed and used by the National Park Service in national parks from 1916 to 1942. Daniel Hull, the National Park Service’s chief landscape engineer, personally designed and oversaw construction of the spring development in 1925.

Criterion C: Design/Construction

Under Criterion C, Apollinaris Spring meets the registration requirements as an early, outstanding example of National Park Service landscape design. It embodies distinctive characteristics of rustic architectural development style marked by naturalistic principles, craftsmanship and native materials. Precedent-setting for other NPS-wide springs developments; its design style has its foundation in the American park movement in the nineteenth century which came to fruition under the stewardship of the National Park Service in the early twentieth century (McClelland 1998, xix). The designed landscape of Apollinaris Spring also represents the work of Daniel R. Hull, one of the influential NPS landscape engineers during the formative years of the NPS. Under Hull’s influence, NPS landscape architects and their principles of rustic architecture and landscape naturalization were instrumental in the

Apollinaris Spring Yellowstone National Park

development of park roads and trails. Through his direction came the development of a stonemasonry technique which “incorporated native materials and achieved an informal appearance that harmonized with nature” (McClelland 1998, 159). Apollinaris Springs established a precedent in rockwork, plantings and spring rehabilitation that would serve as a model for future landscape design within the National Park Service (McClelland 1998, 235, 371).

The property reflects the following areas of significance include in order of priority:

1. Landscape Architecture: reflected by the naturalistic rockwork and plantings and how they blended the site into the surrounding landscape using techniques from the Arts and Crafts movement. It is a representation of early NPS style of landscape design. The project became a forerunner project for NPS rustic architectural design (McClelland 1998, 234-235, 256). The work of NPS Landscape Engineer, Daniel R. Hull, this project received praise both NPS-wide and within the architectural community (Albright 7/27/25 and Underwood 8/4/26). It represents a deliberate shift away from wooden stairways and ramps that occurred in the national parks in the 1920’s (McClelland 1998, 234-235). NPS spring improvement projects, such as in Yosemite National Park, followed the precedent set at Apollinaris Springs to create similar naturalistic rock gardens that were safer sources for drinking water (McClelland 1998, 371).

2. Conservation: reflected by the use of both formalized walking surfaces and improved sanitary conditions as a way of controlling heavy visitation/tourist movement and use and for mitigating the trampling around this spring and its associated wetland. The project was initiated due to unsightly and unsanitary conditions around the spring that had resulted after years of heavy visitation. Hull worked with H.B. Hommon, Sanitary Engineer of the U.S. Public Health Service, to improve the sanitary conditions of the springs through a designed plumbing system. The design ethic practiced by landscape engineers such as Daniel Hull integrated the principles and practices of landscape architecture with the fundamental conservationist philosophy of park service directors Stephen T. Mather and Horace M. Albright (McClelland 1998, 11). In her publication, *Building the National Parks: Historic Landscape Design and Construction*, Linda McClelland best describes how this design ethic is linked to conservation:

During the formative years of the National Park Service, from 1916 to 1942, landscape architects, architects, and engineers forged a cohesive style of landscape design which fulfilled the demands for park development while preserving the outstanding natural qualities for which each park had been designated. This style subordinated all built features to the natural, and often cultural, influences of the environment in which they were placed. Through time it achieved in each park a cohesive unity that in many cases became inseparable from the park’s natural identity.

National Historic Landmark Information

National Historic Landmark Status: No

World Heritage Site Information

World Heritage Site Status: No

Chronology & Physical History

Cultural Landscape Type and Use

Cultural Landscape Type: Designed

Current and Historic Names:

Name	Type of Name
Apollinaris Spring	Both Current And Historic

Ethnographic Study Conducted: No Survey Conducted

Associated Group:

Name of Group:	Eastern Shoshone
Type of Association:	Both Current And Historic
Name of Group:	Europeans /Euro Americans
Type of Association:	Both Current And Historic

Ethnographic Significance Description:

The spring was used by the Eastern Shoshone from likely before contact with Europeans /Euro Americans, if not well before. The use continues through contemporary times.

Records:

Haman Wise (Eastern Shoshone) stopped at Apollinaris Spring with Larry Loendorf to collect water to bring home. This water was typically used for medicinal purposes (curing stomach ailments by settling the stomach or "clean[ing] you out."). He also noticed that there were numerous plants that grew in the area that were also used for medicinal purposes, but said that these plants were not necessarily collected from this site (ERI 7/26/1994).

Chronology:

Year	Event	Annotation
AD 1800 - 1900	Established	Native Americans and tourists continued to drink the water at Apollinaris Spring.
AD 1880 - 1905	Established	Wylie Permanent Camping Company facility (tent camp) operates at Apollinaris Spring.
AD 1910 - 1911	Exploited	Other independent outfitters camped at or near springs.

Apollinaris Spring
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AD 1925	Built	NPS Landscape Architect Daniel R. Hull and Sanitary Engineer M.B. Hammon from the US Public Health Service rehabilitate the landscape around the springs by constructing a designed landscape with extensive stonework and plantings.
AD 1928	Designed	Thomas Vint recommended set of drawings showing a redesign of the development that modifies the pool by adding drinking fountains/bubblers and adds irrigation lines to maintain the plantings. It is not known if this actually happened, since the pool, with or without its bubblers, was removed sometime after the 1930s. Excavation may reveal that the irrigation lines were added.
AD 1930	Developed	A picnic area and rustic-style comfort station is developed across the road.
	Altered	Drinking fountain removed.
	Built	Rustic style kiosk added to terrace area (based on 1950s plans for informational kiosks)
AD 1980	Altered	Pipes removed as the water did not comply with drinking water standards.
AD 2001	Altered	Metal spring-box has been installed over the spring with a lock on it to keep visitors out.

Physical History:

Early History, Pre-1925

Apollinaris Spring, located on Yellowstone National Park's Grand Loop Road has been a stopping place for thirsty travelers since at least the 1880s. The spring was used by the Eastern Shoshone from likely before contact with Europeans /Euro Americans, if not well before. (Sucec, ERI). Theodore Gerrish passed the spring, probably in 1885, and noted: "Soda Springs, so called, boiled out from a little hill beside the road. We tasted its waters, and voted that it could as appropriately be called anything else as 'soda'." Another traveler in 1885, Constance Gordon-Cumming wrote that the Park contained "springs of Natural Apollinaris water, sparkling fountains charged with carbonic acid." She was probably referring to present Apollinaris Spring.

Carter Harrison, an 1890 traveler to Yellowstone wrote:

"Guide books tell us not to drink water. I think their writers were in collusion with the hotel management to force guests to buy [bottles of] lager and apollinaris at 50 cents a bottle. By the way, there is on the first days drive [from North Entrance] an apollinaris spring. It seems to me the simon pure thing. We drank freely of it at the spring and afterwards from bottles carried for several hours. One of the bottles was tightly corked, and, when opened, popped as if will charged... A gentleman in the party who has drank [sic] only Apollinaris since he came into the Park, tasted from my bottle and declared it quite equal to the pure stuff. . . . The hotel people are inclined to disparage the waters of the springs generally, and discourage their use, thereby...largely increasing the consumption of lager and bottled water. . . . The enormous number of empty bottles along the road sides and at the hotels testify to the thirst and timidity of the traveling public."

The "pure stuff" that Harrison referred to was a well-known commercially-bottled product called "Apollinaris Water" (still commercially sold today) which was taken from a spring at Bad Neuenahr-Ahrweiler, Rhineland (Germany), that had similar tastes and properties. Apollinaris mineral water was first sold commercially in 1853 and reached international renown by 1873. By 1890, when the company sold 18 million jugs and bottles, the term apollinaris had come into general usage as a description for mineral water, no matter what its source, as evidenced by the previous descriptions of the waters in Yellowstone. This usage has caused confusion as to when Apollinaris Spring received its official name.

In those days there was a prevalent (and untrue) rumor that because of the geysers and hot springs, park water was not be trusted as drinkable. Thus, bottles of so-called "apollinaris" water were sold by the park hotels as another way to get money out of tourists. Harrison's description depicts this discouragement of consumption by the park's hotel concessioner, the Yellowstone Park Association (YPA). YPA discourage consumption by tourists of not only water from this spring but also of park waters in general in order that it could sell its bottled waters to them. The hotel company appears to have tapped into the "timidity of the traveling public" by telling them that the park's thermal springs made good drinking water difficult to find

Apollinaris Spring Yellowstone National Park

in Yellowstone.

Nevertheless, travelers continued for nearly a hundred years to drink from Apollinaris Spring. An 1894 visitor described it at that time as “a small hole in the ground about a yard wide, full of clear bubbling water with the flavor of strong lemonade charged with carbonic gas---natural soda water of a most agreeable taste.” The reference to lemonade probably related to confusion that was then developing between Apollinaris Spring and nearby Lemonade Creek.

Park concessions employee Larry Mathews applied to the park in late 1896 for a permit to bottle the water of Apollinaris Spring (and also of the spring near Orange Spring Mound) so that he could sell it to tourists for drinking purposes. Superintendent Anderson replied that he would not approve such a permit, because it would “detract from the natural beauty of the park” and because he doubted there would be sufficient demand to make it a paying investment.

In early 1906, the Department of the Interior ordered the park to secure water samples from Apollinaris Spring and other drinking springs in order that chemical analyses could be performed on them. Following the analysis, on which no information has been found, the Department of the Interior sent fifty copies of a poster to the park listing the spring’s ingredients, and they were duly posted in park hotels and other places in June of 1907.

Adding to the popularity of Apollinaris Spring was the establishment in 1898 there of a Wylie Permanent Camping Company facility (tent camp). The facility operated at Apollinaris Spring through the 1905 season, when mosquitoes forced its removal to Swan Lake Flats. Apollinaris Spring was extremely popular as a camping spot from earliest park days through the 1920s. Moreover, some independent outfitters such as licensees Thomas Newcomb, Fred Benson, Clarence Ryerson, and others were located at or near the springs during the years of at least 1910 and 1911.

Apparently the signboards or posters proclaiming the spring’s chemistry were renewed and reposted periodically. Sometime in the 1920s, park superintendent Horace Albright caused a cardboard poster to be placed at Apollinaris Spring that again gave a chemical analysis of the spring. The list included (in order of concentration from highest to lowest) bicarbonic acid, silica, calcium, sodium, sulphuric acid, iron and aluminum, chlorin[e], magnesium, potassium, and nitrous acid.

The 1966 Haynes Guide gave a recent chemical analysis of Apollinaris Spring: “The principal chemical ingredients of this spring are calcium bicarbonate, silica, magnesium and sodium bicarbonates, sodium sulphate, and potassium chloride, the largest amount of any consisting of about ninety-seven parts per million parts of water by weight.”

Notes:

Theodore Gerrish, *Life in the World’s Wonderland*, 1887, pp. 195-96.

Constance Gordon-Cummings, “The World’s Wonderlands in Wyming and New Zealand,” *Overland Monthly* 5, January 1885, p. 13. Additionally, an 1884 newspaper article reported tha

“an Apollinaris Spring” existed at the head of Mill Creek, north of Yellowstone Park. Livingston (Montana) Enterprise, August 5, 1884.

Carte Harrison, A Summer’s Outing and the Old Man’s Story, 1890, pp. 68-70.

“Apollinaris – The Queen of Table Waters,” <http://www.apollinaris.de/english/htm>. May 11, 2001; The earliest known appearance of the capitalized name-form Apollinaris Spring reportedly occurred in Outing magazine for April 1890, p. 20. Both the Yellowstone Card File of place names (in the museum curator’s office) and Aubrey Haines in Box H-3, file 5.2.1. “Place Names,” 1979-80, state this but it is not verified.

J. Sanford Saltus, A Week in the Yellowstone, 1895, p. 24.

See Lee Whittlesey, Wonderland Nomenclature, Lemonade Creek entry for an elaboration on this.

Mathews to Captain George S. Anderson, October 28, 1896, Document 2729; George S. Anderson to Larry Mathews, November 7, 1896, in Letters Sent, vol. VI, p 61.

Thomsas Ryan to John Pitcher, January 3, 1906, Arive Document 6592; John Pitcher to Secretary, Janury 10, 1906, in Letters Sent, vol. XVI, p. 22; Jesse E. Wilson to Acting Superintendent, May 25, 1907, Archive Document 6587.

Establishment of the camp is in infomration included in Letters Went, vol. VIII, p. 14 (September 30, 1898) and vol. IX, p. 63 (November 1, 1899). Removal of the camp is in Chester Lindsley, Chronology of Yellowstone ...p. 194, and also in Archive Document 6426.

Mateirals in Item 96-B, files 201-201, “Licenses,” relating to Apollinaris Spring and these men.

Poster: “analysis of the Waters of Apollinaris Spring,” no date [1919-1929]. Copy at NYP Research LibraVertical Files, “Geology—Chemical.”

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The 1925 Development

At least by 1921, the appearance of Apollinaris Spring was causing concern. Making recommendations after a trip through the park, Daniel R. Hull, chief landscape engineer for the National Park Service, suggested installing a garbage can to for litter and constructing a carefully designed stone wall and rough flagstones. On a 1923 visit, Hull expressed disgust at the unsanitary conditions created by visitors dipping “cups, jugs, buckets, and a variety of other utensils” into the spring. He also expressed concern for the parked cars that congested the roadway and impeded the traffic.

In 1924, Yellowstone began roadside cleanup of the Mammoth to Norris road with a donation provided by John D. Rockefeller, Jr. The park also received a general fund appropriation to improve Apollinaris Spring. Although Hull had provided the park with an initial sketch for the spring development, later discussions with H.B. Hommon, sanitary engineer with the U.S. Public Health Service, resulted in some revisions being necessary. In January, Hull promised a new plan in time for an early construction start, but by March had decided that “the best arrangement will be to do that job on the ground giving it the necessary personal supervision.”

A good account of the project appeared in the June 1925 Monthly Report of the Superintendent:

“[Hull’s] National Park Service activities were unusually important. Collaborating with Mr.

Appollinaris Spring Yellowstone National Park

H.B. Hommon, Sanitary Engineer of the U.S. Public Health Service, he designed a spring effect, using large rocks, for Appollinaris [sic] spring. This project was submitted in the [budget] estimates for the 1926 fiscal year as part of the [park's] sanitation program. With a crew of workmen Mr. Hull began work at Appollinaris [sic] Spring about June 10. He gave his personal attention to this project during most of the time that construction work was in progress. For the approaches to the spring he used limestone slabs mined in the Hoodoos for flagstones. For the rock wall from which the Appollinaris [sic] water issues in several streams he used large obsidian and granite boulders. Mr. Hommon designed the water courses and supervised the installation of the plumbing. He worked out a plan whereby the Appollinaris [sic] water, after passing through the rocks where it can be consumed by the public in a sanitary manner, can be collected and conducted to a [road] sprinkling tank. I am attaching hereto pictures showing the work done at Appollinaris [sic] Spring. You will note that some rather extensive planting [of plants] was also done by Mr. Hull. While engaged in cleaning up around the spring, the foreman of the cleanup crew, Mr. Emil Furrer, discovered a second Appollinaris [sic] Spring heretofore unknown. Mr. Hommon had this spring conducted to the old spring and a concrete basis was built around the big spring in order to make possible the retention of water for admission to the pipe line going to the new rock fountains.”

Mr. Hull contributed much to the national parks in his capacity as a landscape engineer. He received a masters degree in landscape architecture from Harvard in 1914, the first year that separate degrees were offered for architecture and landscape architecture. Hull worked for the park service from 1920 to 1927 during which time he lead landscape architects to assume a leading role in the development of park roads and trails and developed a stonemasonry technique that incorporated natural materials to achieve an informal appearance. Hull worked to improve the scenic quality of parks by eliminating unsightly conditions and restraining construction to keep it as unobtrusive as possible (McClelland 1998, 160-192).

By June 27, the spring development was completed and Albright wrote Hull at his Los Angeles office, “. . . I think it is the most beautiful piece of landscape work that has been done in the national parks as far and I know, . . .” Albright had the park photographer carefully document the spring, including a photograph of himself proudly seated on one of the rock walls. The design also impressed Gilbert Stanley Underwood, architect for the Utah Parks Company, who was at the time, designing a dining hall for the Oregon Shortline at West Yellowstone. Underwood congratulated Albright for promoting “the right sort of atmosphere in the Parks [sic] development.”

“You will be interested to know that the tourists stand around an photograph the new [Appollinaris Spring] and then climb up through the shrubbery, go back and look at the concrete reservoir, monkey with the valves, and in general regard this beautiful piece of landscape work as a child would regard an elephant cage in aq circus. They have ruined most of the shrubbery and have tramped the whole place up worse than ever before. I am in hopes that nature during the fall, winter, and spring will so restore natural conditions around the spring as to satisfy the curiosity of the tourist and cause him to let the situation alone.”

The spring represents a successful early attempt to blend structural developments with the

Apollinaris Spring Yellowstone National Park

natural scenery. Apollinaris Spring reflects the shift away from wooden stairways, ramps and railings to earthen paths and parapets of native stone that occurred in the late 1920's (McClelland 1998, 234-235). The plantings that were used to rehabilitate the spring added to the usefulness and beauty of the area, yet it was not until the end of the decade that the practice was used in a routine manner 1920's (McClelland 1998, 256). The landscape design at Apollinaris Spring established a precedent in rockwork and planting that would serve as a model and example for future construction projects 1920's (McClelland 1998, 371).

Notes:

“Notes taken during trip thru park with Mr. F.L. Olmstead and Harlan P. Kelsey – July 9, 10, 11, 1921. VERIFY author

Daniel R. Hull, Landscape Engineer, Memorandum to Superintendent, Yellowstone National Park, September 13, 1923.

Horace Albright, “Roadside Cleanup,” Fall 1925, in box D-5, file 6, “1925: Road Cleanup, Rockefeller Donations, Expenditures, Project Reports,” YNP Archives.

Dan R. Hull, Chief Landscape Engineer, Letter to Mr. H. M. Albright, March 17, 1925.

Horace Albright, “Appollinaris [sic] Spring,” in Monthly Report of the Superintendent, June 1925, p. 20.

Horace M. Albright, Superintendent, Letter to Mr. Dan R. Hull, chief landscape engineer, June 27, 1925.

Gilbert Stanley Underwood, Letter to Mr. Horace M. Albright, July 31, 1925.

Horace M. Albright, Superintendent, to Mr. Dan R. Hull, chief landscape engineer, July 21, 1925.

Post-construction history

The inconvenience of attempting to drink from chest-level spouting water fountains that splashed on visitors shoes may have been the reason for designing modifications to the Apollinaris Spring development in 1928. Thomas Vint, who had succeeded Hull as the National Park Service's chief landscape engineer, designed a naturalistic drinking fountain and pool for the spring development. Placed on the flagstone terrace, the stone-lined, raised pool measured 12 feet long by 4 feet wide by 30 inches high. Constant flow bubblers along the sides of the pool provided easy drinking access. This fountain would have replaced, what appears in historic photographs, to have been a metal tray cradled on and between large boulders in the same location. The metal tray or fountain was removed at an unknown date. The plan also addressed the need for irrigation lines to the planted areas.

The reconstruction had not yet been made in 1935 when Superintendent Roger Toll wrote that the plan to install drinking fountains encased in travertine would provide a satisfactory solution to the continuing problem of splashing caused by the falling stream (Roger Toll to Frank Mattson, 15 July 1935. Box D38, File 9. Yellowstone Park Archives). During that same month, Toll asked Mattson to provide sketches for parking places at Apollinaris Spring Roger Toll to Frank Mattson, 3 July 1935. Box D38, folder 10. Yellowstone Park Archives).

A comfort station was added across the street in 1931. The park used the style of this structure as the model or standard for park-wide comfort stations (Apollinaris Spring Comfort Station,

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Classified Structure Field Inventory Report, HS-0094, YCR). The 1933 Master Plan describes Apollinaris Spring as a “spring layout with reservoir and drinking fountains.” It also describes an existing auto camp across the street with one standard comfort station with a concrete filtration tank disposal system. This plan proposes the reconstruction of the drinking fountains, and the construction of fireplaces and tables at the auto camp. In the 1941 master plan, Apollinaris Spring is described as a “day-use facility”:

“This area has been developed to permit the public access to the Apollinaris Spring water. Several small parking areas provide parking spaces for the public. The area adjacent to the spring was improved with log walls and steps in 1930. Adjacent to the parking areas, a standard comfort station of log and frame type is available for public use.”

The switch away from labeling it as an auto camp area is again substantiated in the 1965 Master Plan, where Apollinaris Spring is listed as a “picnic area’ with 6 sites. A 1950s plans for informational kiosks shows a rustic style kiosk located at the western side of the terrace. It is not known when this structure was built (Historic Research Associates, 1999, 1-4).

Sometime between the 1930s and 1950s, a rustic-style interpretive kiosk was built at the north-west edge of the terrace. The first time it is even described is in a 1950s plan for informational kiosks (Apollinaris Spring Kiosk, Historic Structures Field Inventory Report, HRA 1999).

In 1963, the park became involved in an interesting controversy over the spring’s name that resulted in the changing of the interpretive sign there. In June of that year, the “Apollinaris Overseas Limited” company of London became concerned that Yellowstone was improperly using their trademark name “Apollinaris.” The company worried that the public would get the impression that its commercial beverage was not the original Apollinaris water and would think that the park's spring was the original. The company wanted an explanation of the Apollinaris company’s own antiquity on the spring’s interpretive sign. The park responded that use of the name in Yellowstone dated to 1890, but did prepare a new exhibit panel. That sign remained in place from 1964 until at least the 1980s.

The spring continued to be used for drinking water through the 1970s. Subsequently, the pipes were removed by the National Park Service as the water did not comply with standards. By 2001, a metal spring-box had been installed over the spring with a lock on it to keep visitors out.

Notes:

“Redesign of Apollinaris Spring,” by Landscape Architecture Division, Yellowstone Plan No. 89.

Information on the “Naming of Apollinaris Spring, October 11, 1963,” in YNP Library vertical files, “Place Names.” See also the more extensive file “Apollinaris Spring, L50” in Box L-18, NP Archives.

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

The Apollinaris Spring site acquires significance from its period of design and construction. It is one of the earliest National Park Service (NPS) landscape developments that used rustic-style stone masonry and set a precedent for other NPS spring developments. It is associated with the twentieth-century movement to develop national parks for public enjoyment and it reflects the practices of park landscape design developed and used by the National Park Service in national parks from 1916 to 1942. Because its historic land use as a stopping point along the Grand Loop Road has not changed, and because the only physical alteration since its period of significance has been the removal of a small pool within the terrace, it retains integrity. The condition is fair, due to the 1988 fires and deferred maintenance. However, the condition can be improved through reestablishing the vegetation that at one time enclosed the development, restoring the plantings that softened the masonry, and stabilizing/preserving the masonry that has deteriorated.

Landscape characteristics are defined as tangible and intangible aspects of an inventory unit which have either influenced the history of the development of the landscape, or are products of it is development. They define and characterize the landscape and, individually and collectively, give a landscape character. They also aid in an understanding of its cultural value. Through an analysis and evaluation of landscape characteristics, one can comprehensively discern contributing and non-contributing features and patterns. These landscape characteristics include: natural systems and features, spatial organization, land use, cultural traditions, topography, circulation, buildings and structures, views and vistas, constructed water features, and small-scale features.

SUMMARY LIST OF CONTRIBUTING FEATURES AND PATTERNS

(Note: These are organized by landscape characteristics. A more detailed description of the contributing features can be found in the Landscape Characteristics section)

NATURAL SYSTEMS AND FEATURES

- Subalpine fir and lodgepole pine forest
- Natural spring and associated wetland

LAND USE

- Recreational and interpretive stop along the Grand Loop Road

SPATIAL ORGANIZATION

- Proximity to road
- Entry zone
- Terrace
- Drip springs as a focal point

CULTURAL TRADITIONS

- NPS Rustic-style, rubble rockwork using large and medium-sized irregularly shaped boulders in

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naturalistic placement

- (Non-extant) use of native shrubs to further blend development into surrounding landscape using early NPS landscape naturalization techniques

VEGETATION (surrounding springs development)

- Native trees
- Native shrubs (indigenous as well as non-extant historic plantings)
- Native grasses and forbes
- Native wildflowers

CIRCULATION

- Edge of Grand Loop Road Historic District (48YE520)
- Stone-curbed sidewalk along road edge
- Two curved walkways with steps
- Stone terrace
- Boulder/stone-edging along walkways and terrace

BUILDINGS AND STRUCTURES (does not apply)

CLUSTER ARRANGEMENT (does not apply)

TOPOGRAPY

- Stone retaining walls which create a flat terrace
- Stone steps up to flat terrace

VIEWS AND VISTAS

- Development was originally enclosed and screened by native vegetation; this was altered by the 1988 fires

CONSTRUCTED WATER FEATURES

- Rustic drip falls

SMALL-SCALE FEATURES

- Boulder-edging around walkways and terrace
- Boulder retaining walls
- Stone benches built into retaining walls

ARCEOLOGICAL SITES

None known at this time

NON-CONTRIBUTING FEATURES AND PATTERNS

- "Do not drink water" wood sign behind drip falls
- Metal spring box

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- Extensive over-growth of vegetation since the 1988 fires opened the spring development to sunlight
- Openness; lack of trees enclosing/screening development- due to tree loss during 1988 fires

Apollinaris Spring has retained all seven aspects of integrity that represents the significant 1925 development. Integrity is defined as the ability of a property to convey its significance. The following seven aspects of integrity are described for this cultural landscape, using features and patterns found in the "Landscape Characteristics" section.

1. LOCATION: The place where the historic property was constructed or the place where the historic event occurred (see all landscape characteristics).

The spring development and all its features remain in their original location.

2. SETTING: The physical environment of the historic landscape; the character of the place in which the property played its historic role (see landscape characteristics "natural Systems and Features," "Land Use," "Topography," "vegetation," "Cultural Traditions," and "Views and Vistas.")

The landscape surrounding Apollinaris Spring has retained integrity of setting. A picnic area was added sometime after the period of significance and before 1933. Since then there are no new developments adjacent to the site. The Grand Loop Road remains a two-lane park road. The condition of the setting has been altered by the 1988 fires, when trees that formerly enclosed the site were lost. This can be remedied through the tree-planting.

3. DESIGN: Design is the combination of elements that create the form, plan, space, structure, and style of the property (see landscape characteristics "Spatial Organization," "Land Use," "Vegetation," "Cultural Traditions," "Circulation," "Buildings and Structures," and "Cluster Arrangement.")

The 1925 design has retained integrity. The only change has been the removal of a small pool that sat within the terrace (sometime after the 1930s). The site continues to be used as a stopping point along the Grand Loop Road. The early NPS-Rustic style used in the original design is intact. The spatial organization; the entry zone along the sidewalk and up the pair of curved steps, the arrival place at the terrace, and the drip springs as a focal point, flanked by two travertine benches, are all in their original configuration. The rustic stonemasonry style is intact, although it is in fair condition. The way in which native and introduced vegetation was used to envelope and enclose the site and blend it into the landscape is no longer evident. The introduced shrub plantings, planted in 1925, have been lost over the years. The native trees that were carefully incorporated into the original construction were lost in the 1988 fires. This can be remedied by replacement of those trees.

4. MATERIALS/SPECIES COMPOSITION: Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. "Species Composition" focuses on the dominant native and introduced plant and animal species (see landscape characteristics "Cultural Traditions," "Circulation," "Buildings and Structures," and "Vegetation.").

Materials used to develop the spring in 1925 are intact and retain integrity. The medium and large-sized, irregularly-shaped basalt and rhyolite boulders, used in a naturalistic style to retain the slope (necessary to create a level terrace paved with travertine), and to edge and contain the travertine walkway and terrace are all extant. The raised wall of rhyolite boulders, used to create the drip falls, is intact, as are two benches constructed of travertine slabs over rhyolite boulders, which flank the drip fall and are integrated into the retaining wall. The original native plantings that were used to soften the stonework and further blend it into the landscape are gone, as are the trees that at one time enclosed the site have been lost due to neglect or the 1988 fires. This can be remedied by replacement of those trees.

5. WORKMANSHIP/ LAND MANAGEMENT TECHNIQUES: Workmanship is the physical evidence of the crafts of a particular culture or people during the period of significance. Management techniques are reflected in the physical characteristics of a biotic community (see landscape characteristics “Cultural Traditions,” “Vegetation,” “Constructed Water Features,” “Small Scale Features,” and “Land Use.”).

The workmanship used to develop the site has integrity. The design style exhibited at Apollinaris Spring reflects the practices of park landscape design developed and used by the National Park Service in national parks from 1916 to 1942. The use of native stone, in irregular sizes and shapes, placed in naturalistic patterns is still evident in the site, although the condition has deteriorated. “Landscape naturalization” methods, developed by the National Park Service in the 1930s, are no longer evident. Trees that existed at the time of construction of the site in 1925 were deliberately left in place in close proximity to the man-made features while native shrubs were planted around the perimeter of the site. These techniques were used to further blend the development into the landscape. These trees were lost in the 1988 fire and the planted shrubs were lost over time; both requiring future replacement to improve their condition. Land management techniques have not changed at Apollinaris Spring; the park still manages for the integrity of existing indigenous biotic communities. The constructed water feature is intact, although deteriorated. The public is not permitted to drink the water from the springs, although there is an interpretive sign that explains this former practice.

6. FEELING: Feeling refers to a landscape’s expression of the aesthetic or historic sense of a particular period of time. Feeling results from the on-site presence of physical features, and from continuing values and meanings of the place alive in contemporary communities; these, taken together, convey the landscape’s historic character (see landscape characteristics “Natural Systems and Features,” “Cultural Traditions,” “Land Use,” and “Views and Vistas.”).

The integrity aspect of “feeling” has been retained. The feeling of a national park landscape, developed between 1916 and 1942, which used what is now referred to as early NPS-Rustic style stonework, is still expressed at Apollinaris Spring. This masonry development carefully presented a more sanitary version of the natural spring to the public in 1925 in a way that protected the spring from impact. The public can still experience the same 1925 spring development as a stop along the Grand Loop Road, although they are now encouraged to not drink the water. The feeling of enclosure has

been lost due to the 1988 fires, however, this can be remedied through tree replacement.

7. ASSOCIATION: The direct link between an important historic event or person and a historic landscape (see landscape characteristics “Land Use,” “Cultural Traditions,” “Vegetation,” “Small-Scale Features,” “Constructed Water Features,” and “Buildings and Structures.”).

The integrity of “association” has been retained. Designed and constructed by Daniel Hull, Chief NPS Landscape Engineer associated with the twentieth-century movement to develop national parks for public enjoyment, it still reflects the practices of park landscape design developed and used by the National Park Service in national parks from 1916 to 1942. Apollinaris Spring is an early, outstanding example of National Park Service landscape design. It continues to embody distinctive characteristics of rustic architectural development style marked by naturalistic principles, craftsmanship and native materials. The naturalistic placement of irregularly shaped basalt and rhyolite boulders and travertine slabs, the formal “presentation” of the natural spring in a rustic fashion, and the continued use of the site as a stopping point along the Grand Loop Road are all evident and intact today.

Landscape Characteristic:

Archeological Sites

Willow Park-west of Apollinaris Spring contains obsidian from Obsidian Cliff. This material was moved there by the glacier that crossed Obsidian Cliff as it moved north. As a consequence, the west side of the highway has great potential from encountering artifacts. However, the Apollinaris Spring area, on the hillside to the east of the road, has no known archeological resources. There is no documentation of any sites near the development.

Buildings and Structures

The only structure on the site is a rustic-style kiosk that was built sometime after the period of significance (between the 1930s and the 1950s). It consists of two vertical log posts which support a log-framed display case. The display case is shielded by a gable roof that is covered with double layers of slit shakes, with a shake ridge finish. The structure of the roof consists of a ridge pole and two plate logs. The plate logs rest on horizontal logs set in notches in the support posts while the ridge pole rests on the top of the vertical posts. (Historic Research Associates, 1999, 1-4)

LCS ID & STRUCTURE NUMBER	STRUCTURE NAME	CONTRIBUTION
None	Interpretive Kiosk	non-contributing

Circulation

The associated circulation system begins with the Grand Loop Road (YE), the parking system, and the pedestrian circulations system to the drip falls.

Vehicle Parking: Two vehicle pullouts have been created on either end (north and south) of the sidewalk along the edge of the Grand Loop Road, although it is not apparent when these were

constructed. Since Hull was concerned with vehicle congestion created by cars parked along the roadway, it is possible that these pullouts were constructed along with the 1925 development as a remedy to that problem (Hull 9/13/23). These pullouts give legitimacy to the ends of the sidewalk extensions beyond the entry steps to the north and south. The slope along these pull-outs has been retained by a dry-laid rubble wall, although the date of construction of these walls is not known and they cannot be seen in the historic photographs. They may have been added with subsequent road-widening projects. In a 1925 photo (figure 10), a wheel of a vehicle can be seen at the location of the south pullout.

Pedestrian Circulation To and Through Springs Development: From the road edge, a stone-curbed sidewalk paved with travertine slabs placed in a flagstone pattern extends 89 feet in length. The curbing is currently the height of a single row of stones; however, historic photographs show a second course of stone, now covered by asphalt. A dry-laid, battered stone retaining wall, borders the interior of the sidewalk. The wall is 106 feet long and 36 inches high. It is constructed of irregularly-shaped and fitted, flat-faced basalt boulders ranging from 24 to 48 inches in size.

A pair of 6 feet 4 inch wide, symmetrical, gently-curved stone walks with intermittently-placed steps leads from the walkway to the terrace at the spring site. Each walk consists of three sets of risers, with landings between. The steps are constructed of white slabs of travertine with irregularly-shaped basalt boulders as copings on the sides. A single riser is located at the main terrace. The two symmetrical walkways curve slightly inward toward the drip falls across the terrace, orienting pedestrians to the water-feature as a focal point as one emerges from the steps onto the terrace.

Contributing patterns and features:

- Edge of Grand Loop Road Historic District
- Flagstone sidewalk along road
- North and south vehicle pullouts
- Two walkways, with steps leading to terrace
- Stone terrace
- Boulder/stone edging of walkways

Constructed Water Features

The water is piped a short distance from where the spring naturally emerges to a location down-slope where the terrain is slightly flatter and closer to the road. On the east side of the constructed oval terrace is the “drip fall,” a raised wall of rhyolite boulders approximately 13 feet 9 inches wide and 4 feet 6 inches high. The piped spring water fills a pool behind the top of a raised rock wall and flows over as a “drip-fall” and also arcs through four tubes hidden in the wall. The water flows into a recessed concrete trough in front of the wall at the foot of the drip falls, which then drains away. From the trough at the base of the drip falls, a metal grate drains into an underground culvert that extends past the terrace, across the road and drains into a wetland near the comfort station.

Visitors could more easily drink from the drip falls created by the raised rock wall and the

“water fountain” created by the tubes hidden in the wall. This was also much more sanitary than dipping utensils in a pool. The tubes/fountains have since been shut off. The drip fall still functions. The non-extant rock-in small basin, on the opposite side of the terrace from the raised drip falls, functioned as pool. This was to be redesigned so that it had bubblers for drinking. However it had been removed sometime after 1935 and it is not evident if the redesign actually happened.

Contributing Patterns and Features:

- Rustic Drip Falls
- Drainage system at base of falls

Cultural Traditions

This historic designed landscape embodies distinctive characteristics of rustic architectural development style marked by naturalistic principles, craftsmanship and native materials. This development style has its foundation in the American park movement in the nineteenth century which came to fruition under the stewardship of the National Park Service in the early twentieth century (McClelland 1998, xix). This design blended man-made elements into the natural landscape by using naturalistic rockwork and plantings; using techniques from the Arts and Crafts movement. The designed landscape of Apollinaris Spring also represents the work of Daniel R. Hull, one of the influential NPS landscape engineers during the formative years of the NPS. Under Hull’s influence, NPS landscape architects and their principles of rustic architecture and landscape naturalization were key in the development of park roads and trails. Through his direction came the development of a stonemasonry technique which “incorporated native materials and achieved an informal appearance that harmonized with nature” (McClelland 1998, 159).

Contributing patterns and features:

- Rustic-style, dry-laid, rubble rockwork using large and medium-sized irregularly shaped boulders
- Non-extant native shrubs around perimeter of rockwork

Land Use

Native Americans had used the water for medicinal purposes. Like other popular natural features in the park, this natural spring was already a popular stop along the two-lane Grand Loop Road. The 1925 development was designed to further facilitate its sensitive recreational use in a more sanitary fashion by Yellowstone National Park tourists.

Contributing patterns and features:

- Recreational and interpretive stop along the Grand Loop Road

Natural Systems and Features

Within this area of the park, the Grand Loop Road follows the western base of a glaciated upland plateau to the east, and Obsidian Creek and alluvial basin to the west. Apollinaris Spring

is between the base of this coarse textured colluvial slope and the road. The vegetation type around the springs is subalpine fir and lodgepole pine that has been partially burned during the 1988 fire. Across the road beyond the adjacent picnic area is non-forested willow-sedge within the alluvial basin. The area receives 20-30 inches of average annual precipitation. The wetland immediately around the springs has an abundance of indigenous wildflowers and grasses/forbes.

Apollinaris Spring is a natural system that has been developed through a cistern, piping, and rock landscaping. The water is piped a short distance from where the spring naturally emerges to a location down-slope where the terrain is slightly flatter and closer to the road. Here a small flagstone terrace has been carved into the slope using stone retaining walls and stone steps. The water was made more accessible and sanitary through the combination of the location, grading, stone work and plumbing system.

Contributing patterns and features:

- Subalpine fire and lodgepole pine forest
- Natural spring

Small Scale Features

The stone benches that were integrated into the rock wall to either side of the drip falls have integrity. They are in fair condition. The stone retaining walls also have integrity, although they, too, are in need of repair. These features have been constructed using a rustic-style; rubble wall, (that appears to be dry-laid, but is actually mortared) with its use of a large and medium-sized irregularly-shaped boulders, blends the entire development into the surrounding landscape.

Contributing patterns and features:

- Stone retaining walls
- Stone benches

Spatial Organization

The Apollinaris Spring development is hemmed in between the upland slope and the Grand Loop Road. The 1925 design brings the spring water down-slope and closer to the road where the terrain is flatter, resulting in its being more accessible to visitors within close proximity to the edge of the road corridor.

Entry Zone: Two vehicle pullouts have been created on either side (north and south) of the sidewalk along the road, although it is not evident when these pullouts were constructed, since the rubble wall retaining the slope at these pullouts is not evident in the 1925 photos. The travertine flagstone sidewalk along the road, with its stone curbing, retaining wall, and symmetrical curved stone-steps, creates a somewhat formal entry to the spring development. In an aesthetically effective contrast, the naturalistic stonework (and at one time the native non-extant plantings) is rustic and blends it into the surrounding landscape.

The Arrival Place; the Terrace: The terrace is carved out of the natural topography and it showcases the drip falls. The two symmetrical stone walkways with steps curve slightly inward, orienting the pedestrian so that they face toward the drip falls across the oval terrace; emphasizing the water-feature as a focal point as one emerges from the steps onto the terrace. The oval shape of the terrace, rimmed by curved and capped stone retaining walls also formalizes the development.

The Focal Point: The somewhat symmetrical pair of stone benches that are integrated into the curved retaining wall flank the drip-falls in the center of the raised back wall, further emphasizing and slightly formalizing the water feature. The rustic-style rubble wall effectively contrasts the formal shapes and arrangement; blending it into the landscape while showcasing the drip falls.

Contributing patterns and features:

- Proximity to road
- Entry Zone
- The Arrival Place: the flagstone terrace
- Focal Point: the constructed water features or drip falls

Topography

Within this area of the park, the Grand Loop Road follows the western base of a glaciated upland plateau with Obsidian Creek and alluvial basin to the west. The topography dictated the location of the road, which hugs the parallel contours just above and east of the meandering, slow flowing, Obsidian Creek and Willow Park valley and meadows. Apollinaris Spring is between the base of this coarse textured colluvial slope and the road.

The designed Apollinaris Spring is on a terrace at approximately 7300 feet in elevation. The stone retaining walls manipulate the slope to create a flatter small terrace. The rock work blends well into the colluvial slope. Visitors could more easily access this flat terrace that was closer to the road using the flagstone-style steps.

Contributing patterns and features:

- Stone retaining walls
- Stone steps

Vegetation

The vegetation of Apollinaris Spring is native to Yellowstone National Park. The designed terrace was located within the wet environment of the spring. After the spring development was completed in 1925, unspecified native plantings (non-extant) were made to rehabilitate the area disturbed by previous use, and also soften the rockwork and blend it into the surrounding landscape (McClelland 1998, 256). In addition, the planted shrubs (non-extant) accentuated the vertical height of the walls. In 1928, Thomas Vint submitted a redesign of the Apollinaris Springs development. One of the modifications calls for “a line of pipe provided to each side (and central area) of fountain area which will furnish water for irrigating shrubbery” (Drawing NP-YEL-89). It is not apparent that this re-design of the falls was actually accomplished. The

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1925 and 1934 photographs show the surrounding forest and shrub plantings enveloping or enclosing the terrace. This effect has been reduced due to the loss of these trees to the 1988 fire as well as the loss of planted shrubs.

Since the 1988 fires, the additional sunlight and wet, protected environment of the development have created an over-growth of plants. These plants are growing in and around the stonework; in some cases displacing and destabilizing the stones themselves.

A diverse vegetative community of conifer trees, low shrubs, indigenous wildflowers, and grasses now surround the spring. These include (see appendix for scientific names):

Trees: Douglas-Fir, Sub-Alpine Fir, Engelmann Spruce, Lodgepole Pine
Shrubs: Grouse Whortleberry
Indigenous Wildflowers: Groundsel, Geranium, Avens, Elk Thistle, Yarrow, Strawberry, Monkshood, Bluebells, Bedstraw, Harebells, Coneflower, Goldenrod, False-dandelion, Cinquefoil, Violet, Sweet-cicely, Bog-orchid, Willow-weed, Rue-anemone, Yampah
Grasses/Forbes: Nodding brome, Mountain brome, Blue Wildrye
Sedges/Rushes: Sedge
Horsetails: Common Scouring-Rush, Common Horsetail

Contributing Patterns and features:

- Surrounding trees (greatly thinned due to fire in 1988)
- Existing indigenous shrubs
- Existing indigenous wildflowers
- Existing indigenous grasses

Non-Contributing elements:

- The extensive overgrowth of vegetation in and around the stonework
- Lack of enclosure created by 1988 fire
- Lack of shrub plantings that at one time softened and blended the development into the surrounding landscape

Landscape Characteristic Graphics:



1925 view of the drip falls from the north entry. This Haynes postcard shows the trees surrounding the site and the planted shrubs around the perimeter of the rockwork. Drip falls and the south bench in the center of the photograph. (YELL-94281).



The same of the drip falls showing the vegetation surrounding the site for comparison. The drip falls and the north bench are just under the new sign. Much of the sense of enclosure has been diminished by the 1988 forest fires (2002).

Views and Vistas

Apollinaris Spring was designed in an enclosed setting. Large conifer trees surrounded the site. The trees, lush vegetation, and running water provided a cool, secluded retreat for travelers on the dusty park roads. The design incorporated no known view or vistas. The 1988 fires have greatly thinned the surrounding trees and vegetation, opening up views that previously did not exist. Although new young conifers are growing around the site, currently the sense of enclosure toward the south no longer exists. See figure x and x for historic vs. current views.

Contributing patterns and features:

- Enclosed development, screened by vegetation

Non-Contributing elements:

- Open views created by 1988 fires

Condition

Condition Assessment and Impacts

Condition Assessment: Good

Assessment Date: 10/05/2006

Condition Assessment Explanatory Narrative:

The NPS Historic Preservation Training Center and the park's trail crew completed the masonry preservation project, which upgrades the Apollinaris Spring condition from "Fair" to "Good."

Condition Assessment: Fair

Assessment Date: 07/01/2005

Condition Assessment Explanatory Narrative:

The NPS Historic Preservation Training Center has determined the condition to be fair. The features are suffering from general aging and lack of maintenance. Unwanted vegetation has encroached upon and within the site. Forest duff has begun to collect throughout the site. Boulders, from within the retaining walls, have become dislodged and are spilling from the walls. In isolated areas large caliper trees and-or their root systems have displaced wall sections. The irregularly shaped travertine paving stones of the terrace area and walkway along the roadway have either settled or heaved leaving very uneven and irregular surfaces. When uncontained, these stones are also migrating outward, causing joints between stones to widen. Stone treads, within the lights of steps leading to the terraced area from the roadway, have become displaced. The deterioration of individual stones is wide spread. Mortar has failed.

The primary root cause of deterioration effecting masonry features associated with the Apollinaris Spring site is moisture infiltration. The site is naturally wet. This site condition, coupled with a significant snow pack, provides a situation that when subjected to freeze/thaw cycles is very susceptible to accelerated deterioration. Considerable amounts of moisture are entering individual units (stones) and associated mortar joints. When this retained moisture freezes, it has a tendency t cause individual stones to crack and spall, mortar to fail, and heaving of poorly drained areas. Saturated conditions have also likely caused settling of flatwork (stone paved surfaces). This type of deterioration is found throughout the site. The inherent nature of the building stone employed in the development of the site lends itself to accelerated deterioration. The porous nature and high percentage of cracks and fissures makes the stone susceptible t failure.

The secondary cause of deterioration is vegetation encroaching on or within the site. Light vegetation in the form of grasses and woody plant matter has taken hold in masonry joints and cracks within individual stones. This is not only allowing moisture to be retained within the masonry but is a visual distraction from the historic and intended appearance and is causing surface spalling of stones. Larger caliper vegetation, in the form of trees and their root systems, has encroached on the masonry elements and is causing heaving of flatwork and lateral loads against retaining walls.

A third cause of deterioration is the lack of maintenance. The site appears to have been neglected over the years. The waterway is in disrepair allowing water to run uncontrolled over the masonry and is ponding in areas. The collection pool beneath the spring outlet (drip falls) is cracked and poorly pitched permitting water to collect. The outlet drain from the collection pool to daylight is partially clogged and

not performing optimally. Organic matter and forest duff has collected throughout the site. It should also be noted that modifications/improvements to the adjacent roadway has negatively impacted those masonry elements immediately alongside the roadway. Reveals of the curbing and possibly an entire tier have been obscured. Drainage of the road surface has been directed towards the masonry elements allowing for the saturation of masonry.

Stabilization Measures:

Maintain Apollinaris Spring, PMIS No. 82349

Impacts

Type of Impact: Deferred Maintenance

External or Internal: Internal

Impact Description: See explanation in the condition assessment narrative.

Type of Impact: Improper Drainage

External or Internal: Internal

Impact Description: See explanation in the condition assessment narrative.

Type of Impact: Microclimate

External or Internal: Internal

Impact Description: See explanation in the condition assessment narrative.

Type of Impact: Fire

External or Internal: External

Impact Description: Fire in the surrounding forest, especially from the 1988 fire. See explanation in the condition assessment narrative.

Stabilization Costs

Landscape Stabilization Cost: 47,230.00

Cost Date: 02/17/2003

Level of Estimate: C - Similar Facilities

Cost Estimator: Park/FMSS

Landscape Stabilization Cost Explanatory Description:

Apollinaris Spring
Yellowstone National Park

Above cost taken from PMIS Project Statement No. 82349

Treatment

Treatment

Approved Treatment Document: Other Document

Approved Treatment Document Explanatory Narrative:

Masonry Preservation Plan: NPS Historic Preservation Training Center will be carried out in late spring 2006.

Bibliography and Supplemental Information

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Year of Publication: 1928
Source Name: Other
Citation Type: Graphic
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Citation Title: Memorandum to Superintendent, Yellowstone National Park
Year of Publication: 1922
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Citation Type: Narrative
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Year of Publication: 1922
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Citation Type: Narrative
Citation Location: YELL Park Archives
- Citation Author:** Hull, Daniel R., Landscape Engineer
Citation Title: Correspondence to Albright, H.R., Yellowstone Superintendent
Year of Publication: 1925
Source Name: Other
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Year of Publication: 1925
Source Name: Other
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Year of Publication: 1925
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Citation Type: Narrative
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Citation Author: R. W. T.
Citation Title: Correspondence to Mr. Mattson
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Source Name: Other
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Citation Author: Whittlesey, Lee H.
Citation Title: A Brief History of Yellowstone's Apollinaris Spring
Year of Publication: 2001
Source Name: Other
Citation Type: Narrative
Citation Location: Yellowstone Park Archives