



WATER-RIGHT DOCKET

Blue Ridge Parkway

Docket No: 12

CRABTREE MEADOWS RECREATION AREA

Other Supporting Information

10-05-1959: memorandum re: water resources investigations; october 05, 1959



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

BLUE RIDGE PARKWAY

October 5, 1959

IN REPLY REFER TO:

L54

REGION ONE	
OCT 6 1959	
Reg. Director	
Asst. Reg. Dir.	
Ch. Operating	
Ch. Ranger Act.	
Ch. Interpretation	
Ch. Admin.	
Ch. Rec. Mgmt.	

Memorandum

To: Regional Director, Region One

From: Superintendent, Blue Ridge Parkway

Subject: Water Resources Investigations - Gillespie Gap and Crabtree Meadows, Blue Ridge Parkway, North Carolina

Mr. Vick's help in providing emergency funds for water resources investigation work at Gillespie Gap and Crabtree Meadows is greatly appreciated. The delay in providing you with a report relating to the accomplishment of the work at these two areas is due to the delayed completion of the Crabtree Meadows deep well. This was necessary because construction funds for the well at Crabtree Meadows were not available until the 1960 F.Y. Now, however, water systems at both Gillespie Gap and Crabtree Meadows are virtually completed and the following report is submitted for your review and information:

Gillespie Gap

On May 26, 1959, Mr. Conrad of the Geological Division of the N. C. State Department of Conservation and Development, visited the Gillespie Gap Area for an "on the ground" determination of a well drilling location for a deep well water supply to supplement the existing Gillespie Gap water supply.

Subsequent bid invitations and contract award to Smith and Carpenter Well Drilling Company of Newland, N. C., allowed for the completion of the well drilling operations by July 1, 1959.

The well was drilled to a depth of 135 feet. 58 feet of 6 $\frac{1}{2}$ " I.D. casing were sealed 8 feet into solid rock with a cement grout. A dye test was made to insure against surface water infiltration. After well drilling operations were completed, water was standing 15 feet from the ground surface, and, during pumping tests at 20 gallons per minute for 14 hours the draw down reached only 28 feet.

This water supply was completed and in operation before the 4th of July weekend. A dependable and potable water supply was available for the heavy visitation during that period. The additional water supply amply fulfills our requirements and we are pleased with the results of this additional development at the Gillespie Gap Area.

Funds for the investigation by the N. C. State Geologist and the test well drilling at this location were provided by the water resources money made available through Mr. Vick's aid.

Crabtree Meadows

An "on the ground" determination for the site of a test well water supply supplement to the Crabtree Meadows Recreation Area was made on May 26, 1959, by Mr. Conrad of the Geological Division of the N. C. State Department of Conservation and Development. Because funds were not available for the well drilling operations, it was necessary to postpone this work until the beginning of the 1960 Fiscal Year. Construction Account 514.46 was reactivated, and, as a result of competitive bidding, again Smith and Carpenter Well Drilling Company of Newland, N. C., was the successful bidder. On September 21 the contractor had completed the well and drilled to a depth of 180 feet. This 180 foot deep well was cased and tested in the customary manner.

The well drillers testing equipment was not capable of testing well capacity at greater than 45 gallons per minute. However, during pumping tests at this capacity, draw down reached approximately 15 feet from ground surface where well water recovery was stable. This amount of water exceeds considerably our most optimistic goal and we feel sure that the minimum capacity of 45 gallons per minute obtained in the pumping tests will permanently provide a dependable potable water supply at Crabtree Meadows Recreation Area.

Funds for the water investigation work performed by the N. C. State Geologist were provided by water resources. The well drilling was done under Construction Account 514.46.

We realize it was difficult to program water resources funds on such short notice under our emergency request. We appreciate the cooperation we received and hope you will inform Mr. Dunn of our progress and success on these projects.


Sam P. Weems
Superintendent

In duplicate

In reply refer to:

154

Vick
4/8/59

Memorandum

To: Director
From: Acting Regional Chief of Operations, Region One
Subject: Water Resources Investigations at Blue Ridge Parkway

On April 2, Engineer Batten, Blue Ridge Parkway, and Mr. Paul Henderson, United States Public Health Service, discussed with Mr. Vick the urgent need for locating and developing new water supply sources at Gillespie Gap and Crabtree Meadows Developments.

Gillespie Gap

After one year of operation of the Gillespie Gap Development, certain conditions made it apparent that a more dependable and constant water supply was necessary for the continued operation of the various facilities at this location. These include increased visitation at the North Carolina Museum of Minerals, the recent occupancy of two new employee residences, the continued operation of the maintenance area, and the diminishing flow of the only spring in this area caused by several consecutive dry seasons. The weekend visitation to the Museum last summer was approximately 2,700 persons per day. Consequently, the water usage by visitors put a heavy drain on the area's water supply and in some instances the lack of water made it necessary to close the public comfort stations in the Museum. The Public Health Service is very concerned about this situation.

The Park personnel recorded flow measurements of the Gillespie Gap spring last March and the readings indicated the spring supplied six gallons per minute; however, during June and July the spring delivered four gallons per minute. By the latter part of the summer and up through October, this particular spring had reduced in flow capacity to one and one-half gallons per minute.

The Park visitation count for Gillespie Gap for the 1958 tourist season showed 49,460 visitors. It was also determined by the Park that each visitor used an average of three and one-half gallons of water.

The limited quantity of water available from the existing spring makes it imperative to locate a new water source in the vicinity of this development. Messrs. Batten and Henderson have made a detailed investigation of the area, and they have failed to locate any additional springs that would provide sufficient quantity for the Gillespie Gap water requirements. Therefore, the Park recommends using a deep well for the additional water source and to install an auxiliary pumping station to the present water system.

The attached Sketch No. 1 shows the approximate location of the facilities at this area.

We are requesting that \$2,500 be allotted to the Blue Ridge Parkway, if any unobligated funds are available, so that the necessary water resources studies can be made at Gillespie Gap.

Crabtree Meadows

This recreation area is located approximately ten miles south of Gillespie Gap. The facilities at this location include a campground, a picnic area, and a concession operation consisting of a gas station and sandwich shop. Five water-operated comfort stations have been provided for visitor use.

The attached Sketch No. 2 shows the approximate location of all facilities and the existing and proposed water sources at the Crabtree Meadows area.

Last August the storage tank capacity was expanded to 50,000 gallons. Also, all available springs in the area have been developed into the completed water system for the area.

The increased visitation to the campground and picnic area has brought about an urgent demand for more water supplies at Crabtree Meadows. In the near future the Parkway plans to convert the existing picnic area to a campground and develop another picnic area approximately a mile or so from its present location.

Messrs. Batten and Henderson have estimated that the additional water flow capacity needed to meet the present demand is fifteen to twenty gallons per minute. We believe that this flow capacity can be obtained from a properly located deep well.

Engineer Batten informed Mr. Vick that Water Resources Investigations funds are also needed for determining the new water supply sources at Crabtree Meadows and the proposed picnic area. Funds for conducting these water resources studies are not as urgently needed as those funds for the work at Gillespie Gap.

We can incorporate the water resources studies at Crabtree Meadows into our 1960 program if funds are not available during this fiscal year.

Mr. Vick will be glad to discuss this proposed work with you, if you so desire.

(SIGNED)

V. M. Ludgate
Acting Regional Chief of Operations

Attachments

AVick:epf

Copy to: Superintendent
Blue Ridge Parkway

✓ General Mr. Paul Henderson
United States Public Health Service
Charlottesville, Virginia

Daybook

BLUE RIDGE PARKWAY

WATER SYSTEM DATA

- AREA Blue Ridge Parkway DATE COLLECTED _____ COLLECTED BY _____
- Name of System: Crabtree Meadows
 - Location: State North Carolina County McDowell General Area MP. 339.5
Reference to permanent landmark _____
 - Source of Supply: Two springs & well Capacity 50gpm
(Well, spring, stream, impoundment, etc.)
 - Type of System: Pumped from well; gravity from springs to storage
(Pumped, gravity, etc.) Gravity distribution
 - Treatment: None
(Filtration, Chlorination, Airation, etc.)
 - Distribution Mains: Size 6" Length 852'; Size 2" Length 246'
Size 4" Length 341'; Size 1" Length 235'
Size 3" Length 7658'; Size _____ Length _____
 - Pump Unit: Make Jacuzzi; Type Submersible; Model No. 254H
Serial No. BW14156; Outlet 1-1/4 in.; Inlet 1-3/4 in.
(Size) (Size)
 - Power Source: Electric Motor: Make Franklin; HP 2
(Elec., gas, generator)
Serial No. CBS1028Y5D; Voltage 230; Amps 11
RPM 3450; Type Submersible; Phase Single
Cycles 60; Others _____; Stages 28
 - Control: Automatic Float; Manual _____
(Float, Electrode, Pressure, Time)
Other _____
(Explain)

Rec'd by Chug. O.W.-WSC memo to Chug. B.W. 7-17-68 #12

10. Pump Design: Capacity _____ gpm _____ (Design) _____ gpm
(Actual) _____
Head _____ ft. _____ (Design) _____ ft.
(Actual) _____

11. Pump Housing: Type Const. Block ; Concrete ; Size 6' x 10'
(Walls) (Roof)

12. Storage: Underground ; Type Const. Concrete
(Pneumatic, elevated, underground, etc.) (concrete, wood, steel)
Size _____ ; Capacity 50,000 gal. ; Inlet 3829.25 ft. 1-1/4 in.
(Elev.) (Size)
Outlet 3829.17 ft. 6 in. ; Pressure Setting _____
(Elev.) (Size) (if pneumatic)

13. Distribution: Water Closets 31 ; Lavatory 31 ; Urinal 16 ;
Drinking Fountain 15 ; Hose Bibs 14 ; Residences _____ ;
Other Gas Station ; Restaurant ; Seasonal Trailer

14. Metered or nonmetered: Metered ; No. 1 ; Size 1"
No. 4 ; Size 2"
No. _____ ; Size _____

15. Fire Protection: Fire Hydrants 3 ; Yard Hydrants 1

16. Water Analysis: _____

17. Condition of System: Good
(Repairs needed itemize)

Form 10-174
(Rev. 1/56)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

REPORT 7 SPL

COMPLETION REPORT OF CONSTRUCTION PROJECT

D2621

REGION One	AREA Blue Ridge Parkway	COUNTY McDowell & Yancey	STATE North Carolina
PROJECT OR JOB TITLE Water System Expansion - Crabtree Meadows Picnic Area		PCP NO. U-189	
LOCATION IN AREA Crabtree Meadows, North Carolina		MASTER PLAN NO. PKY-BR-CM-2001S	BUILDING NO. 434
WORKING DRAWING NO. AND TITLE PKY-BR-CM-2069A		ACCOUNT NO. P-56	
APPROPRIATION TITLE AND SYMBOL 141037 Construction (Liq. of Contract Auth.) NPS		DATE WORK COMPLETED December 1961	
CONTRACT NO.		DATE WORK STARTED October 1960	
NAME OF CONTRACTOR		ADDRESS	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY	UNIT COST IN PLACE	TOTAL COST IN PLACE
Construct and install complete water system expansion, Crabtree Meadows Picnic Area	1	13,005.22	13,005.22
Ingersoll-Rand Model J-40 Jackhammer, Serial No. 735867	1	530.70	530.70
PSE (P. S. 1961 - 13,446)			1,821.93

TOTAL 15,357.05

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES
5,883.85	530.70	5,671.49
OTHER		
1,449.28		
PSES		
1,821.93		

Certified by: *H. R. Johnson*
H. R. Johnson, Accounting Officer

ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
FINAL CONTRACT AMOUNT	FOURTH	FIFTH	SIXTH

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and Title)

APPROVED BY (Name and Title)

Parkway Engineer

May 15, 1962

APPROVED BY (Name and Title)

Superintendent

May 15, 1962

Narrative Report:

This National Park Service day labor project was started in October 1960 and completed in December 1961. The construction of the water system expansion was done according to PKY-BR-CM-2069A. The work consisted of installing water distribution lines in the new picnic area with connections to the existing Crabtree Meadows water system. The following were installed: 575' of 1" plastic pipe; 147' of 3" galvanized pipe; 4400' of 3" plastic pipe; and, 559' of 6" asbestos cement pipe.

This is a necessary and usable facility which provides potable water for visitor use at the new Crabtree Meadows Picnic Area.

Form 10-1-4
(Rev. 1/56)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

REPORT 7 SPL

COMPLETION REPORT OF CONSTRUCTION PROJECT

B2621

REGION One	AREA Blue Ridge Parkway	COUNTY McDowell & Yancey	STATE North Carolina
PROJECT OR JOB TITLE Construction of Water Supply Addition		PCP NO. U-189	
LOCATION IN AREA Crabtree Meadows, N. C.		MASTER PLAN NO. PKY-BR-CM-2001B	BUILDING NO. 419
WORKING DRAWING NO. AND TITLE PKY-BR-CM-2067		ACCOUNT NO. 514.46	
APPROPRIATION TITLE AND SYMBOL 14X1037 Construction (Liq. of Contract Auth.) NPS		DATE WORK COMPLETED October 1961	
CONTRACT NO.		DATE WORK STARTED April 1958	
NAME OF CONTRACTOR		ADDRESS	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY	UNIT COST IN PLACE	TOTAL COST IN PLACE
Construction of water supply addition to supplement and adequately provide potable water for the heavily used Crabtree Meadows Recreational Area.	1	15,011.47	15,011.47
PS&S (F.Y. 1958 and Prior 12.74%)			1,912.46
TOTAL			16,923.93

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES	
5,312.48		6,295.27	
OTHER			
3,403.72			
PS&S			
1,912.46			
Certified by: <i>H. L. Johnson</i> H. L. Johnson, Accounting Officer			
CHANGE ORDERS			
ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
FINAL CONTRACT AMOUNT	FOURTH	FIFTH	SIXTH

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title) <i>Sam P. Weeks</i>	DATE May 15, 1962
APPROVED BY (Name and title) <i>Sam P. Weeks</i> Sam P. Weeks, Superintendent	DATE May 15, 1962

ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS, AND "AS BUILT" DRAWINGS TO THIS FORM.

GPO 911643

Narrative Report:

This National Park Service day labor project started in April 1958 and completed in October 1961. The construction of the water supply addition was made according to Drawing PKY-BR-CM-2067. The work consisted of developing a spring; constructing a 3,000 gallon reinforced concrete underground reservoir with a concrete block pump house (Bldg. 419) over it; installing an electric water pump w/controls; constructing an additional 30,000 gallon reinforced concrete underground storage tank; installing 700 feet of 1" plastic water pipe and all necessary fitting to connect to the existing system; drilling 188' deep well and installing a Jacuzzi 2 H.P. 230V submersible pump with all necessary electric connections and water pipe.

This is a necessary and usable facility providing a supplemental water supply for the Crabtree Meadows Recreational Area.

Form 10-174
(Rev. 2-56)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION One	AREA Blue Ridge Parkway	COUNTY Yancey	STATE No. Carolina
PROJECT OR JOB TITLE Auxiliary Water Supply System			PCP NO. W-139
LOCATION IN AREA Crabtree Meadows Recreational Area		MASTER PLAN NO. PXY-BR-CH-2041B	BUILDING NO.
WORKING DRAWING NO. AND TITLE CH-2066B Auxiliary Water Supply			
APPROPRIATION TITLE AND SYMBOL 14X1095 Construction, C. A.		1,372.04 ✓	WORK ORDER NO. 2461
14X1015 Construction, C. A.		1,225.42 ✓	
CONTRACT NO.		DATE WORK STARTED September 1953	DATE WORK COMPLETED April 1955
NAME OF CONTRACTOR		ADDRESS	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
Development of two springs, with spring storage reservoir, pump house, pump and mains to connect to existing water system, Crabtree Meadows.	1	6,597.46	6,597.46
TOTAL			6,597.46

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	1,817.62 (C.A.)	EQUIPMENT	Operation	297.10 (C.A.)	MATERIALS AND SUPPLIES	1,166.82 (C.A.)
	1,733.59 (O.A.)			144.15 (C.A.)		1,192.68 (O.A.)
OTHER	90.50 (C.A.)	Certified: Henry Dyer, Supervisory Accountant				
	155.00 (C.A.)	CHANGE ORDERS				

ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
FINAL CONTRACT AMOUNT	FOURTH	FIFTH	SIXTH

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title) <i>Blanton Clement</i> Blanton Clement, Parkway Engineer	DATE <i>Apr 11, 1958</i>
APPROVED BY (Name and title) <i>Edward B. Strickland, Acting Superintendent</i>	DATE <i>Apr 11, 1958</i>

(ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS, AND "AS BUILT" DRAWINGS TO THIS FORM)

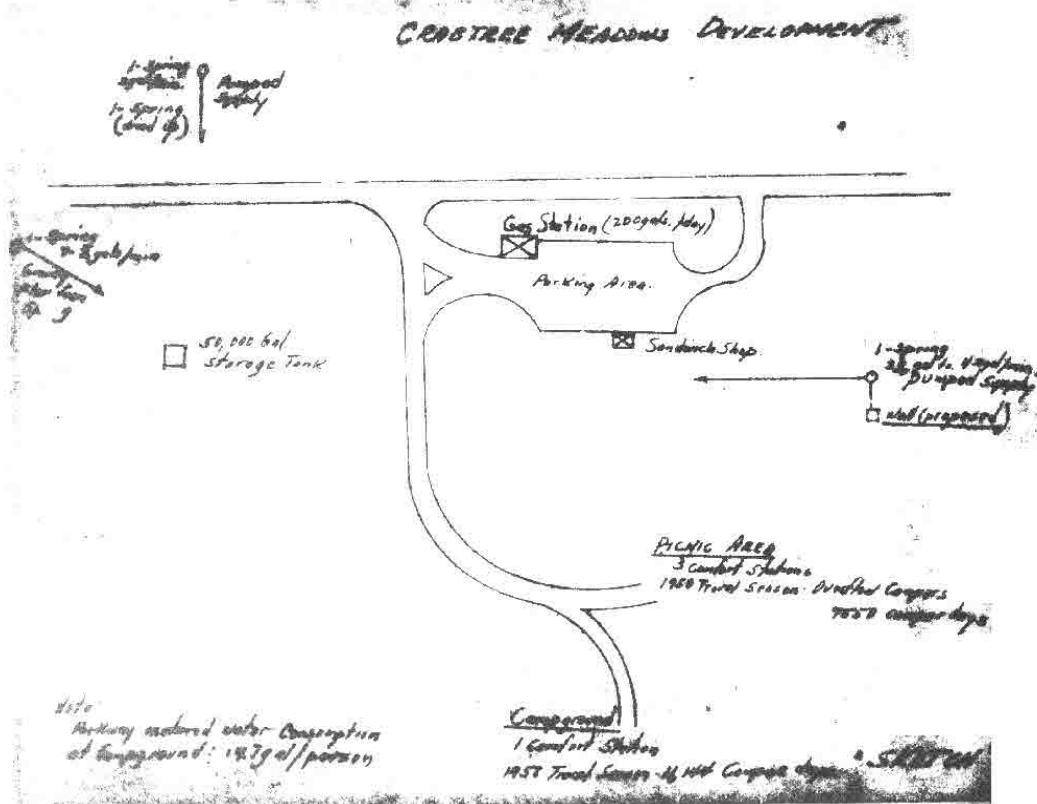
Narrative Report:

Work started September 1953 and was completed April 1955 for Auxiliary Water System by National Park Service day labor. Developed two springs; installed 60 ft. of 1" pipe collection lines; constructed a 3,000 gallon underground, reinforced concrete water storage reservoir, with cinder block pump house above, equipped with an electric driven pump; installed 558 ft. of 1 1/4" pump supply line with connection to existing supply line for main water supply system; provided necessary valves and fixtures.

This usable facility furnished needed supplemental water to existing system.

"As Built" Drawing No. "KY-BR-CH-2066C attached.

Maps and Miscellaneous Information



Docket Information

Number of Documents in Docket 14

Documents Dated from 4/11/1958 to 7/17/1968

Docket Compiled: 2/1/2011