



WATER-RIGHT DOCKET

Blue Ridge Parkway

Docket No: 13

GILLESPIE GAP AREA.

Other Supporting Information

10-05-1959: memorandum re: water resources investigation; 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. Dir.	
Ch. Engineer	
Ch. Ranger Act.	
Ch. Interpretation	
Ch. Maintenance	
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. Conral 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 23 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

A reply refer to:
154

Vick
4/8/59

APR 8 - 1959

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. R. Ladgate
Acting Regional Chief of Operations

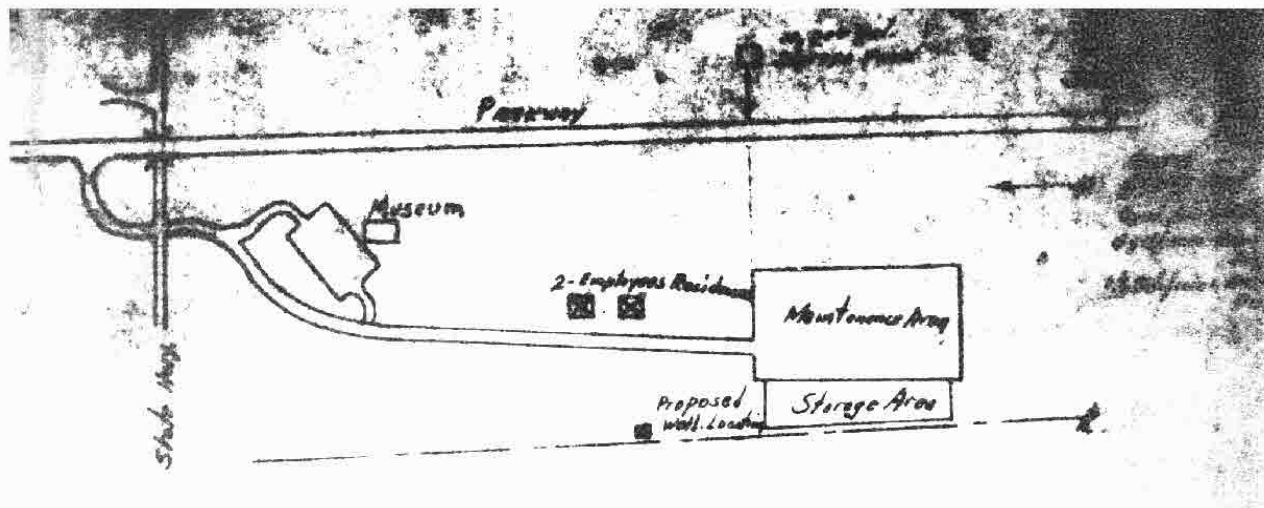
Attachments

AVick:repf

Copy to: Superintendent
Blue Ridge Parkway

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

Daybook



GILLESPIE GAP DEVELOPMENT

BLUE RIDGE PARKWAY

WATER SYSTEM DATA

- AREA Blue Ridge Parkway DATE COLLECTED _____ COLLECTED BY _____
1. Name of System: Gillespie Gap
2. Location: State North Carolina County Mitchell General Area MP 330.9
- Reference to permanent landmark _____
3. Source of Supply: Well Capacity 20 gpm
(Well, spring, stream, impoundment, etc.)
4. Type of System: Pumped to storage - Gravity distribution
(Pumped, gravity, etc.)
5. Treatment: None
(Filtration, Chlorination, Aeration, etc.)
6. Distribution Mains: Size 6" Length 160'; Size 1-1/2" Length 135'
Size 4" Length 143'; Size 1" Length 300'
Size 2" Length 463'; Size _____ Length _____
Size _____ Length _____; Size _____ Length _____
7. Pump Unit: Make Red Jacket; Type Submersible; Model No. 150K1
Serial No. 356-Code EZ; Outlet _____ in.; Inlet _____ in.
(Size) (Size)
8. Power Source: Electric Motor: Make _____; HP 1-1/2
(Elec., gas, generator)
- Serial No. _____; Voltage 230; Amps 7
RPM 3450; Type submersible; Phase 1.0
Cycles 60; Others _____; Stages 19
9. Control: Automatic Time; Manual _____
(Float, Electrode, Pressure, Time)
- Other _____
(Explain)

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

11. Pump Housing: Type Const. Block _____; Concrete _____; Size 4' x 6'
(Walls) (Roof)

12. Storage: Underground _____; Type Const. Concrete
(Pneumatic, elevated, underground, etc.) (concrete, wood, steel)
Size _____; Capacity 10,000 gal.; Inlet 2908.0 ft. 6 in.
(Elev.) (Size)
Outlet 2908.0 ft. 6 in.; Pressure Setting _____
(Elev.) (Size) (if pneumatic)

13. Distribution: Water Closets 5; Lavatory 5; Urinal 3;
Drinking Fountain 2; Hose Bibs 6; Residences 2;
Other Visitor center; Maint. Area; Seasonal trailer

14. Metered or nonmetered: Nonmetered; No. _____; Size _____
No. _____; Size _____
No. _____; Size _____

15. Fire Protection: Fire Hydrants 5; Yard Hydrants 1

16. Water Analysis: _____

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

Form 10-174
(Rev. 8-56)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPLETION REPORT OF CONSTRUCTION PROJECT D2621

REGION One	AREA Blue Ridge Parkway	COUNTY Mitchell	STATE North Carolina
PROJECT OR JOB TITLE Construction of Addition to Water System			PCP NO. U-73-2
LOCATION IN AREA Gillespie Gap, Section 2-L		MASTER PLAN NO. PKY-BR-GEN-2297	BUILDING NO.
WORKING DRAWING NO. AND TITLE PKY-BR-2L-2079 Utilities Gillespie Gap Residences # 135 and 136			
APPROPRIATION TITLE AND SYMBOL 14X1037 Construction, (Liq. of Contract Auth.) NPS			WORK ORDER NO. 514.64
CONTRACT NO.		DATE WORK STARTED June 1958	DATE WORK COMPLETED July 1958
NAME OF CONTRACTOR		ADDRESS	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
Water facilities existed in this area; therefore, extension of present system including necessary valves and drains provided water supply facilities for Gillespie Gap Employee Residences.	1	713.05	713.05 ✓
PS&S and Other Indirect Costs			108.88
		TOTAL	821.93 ~~823.44~~

SUMMARY OF EXPENDITURES

PERSONAL SERVICES 372.13	EQUIPMENT None	MATERIALS AND SUPPLIES 191.30
OTHER 149.62	PS&S 108.88	Certified: <i>Henry Svec</i> Henry Svec, Supervisory Accountant
CHANGE ORDERS		
ORIGINAL CONTRACT AMOUNT	FIRST	SECOND
FINAL CONTRACT AMOUNT	FOURTH	FIFTH
THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES		
SUBMITTED BY (Name and title) <i>Earl W. Batten</i> Earl W. Batten, Parkway Engineer	DATE October 23, 1959	
APPROVED BY (Name and title) <i>Sam P. Moore</i> Sam P. Moore, Superintendent	DATE October 23, 1959	

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

38105

Narrative Report:

This work was performed by National Park Service day labor between June 1958 and July 1958. Water facilities for Employee Residences 135 and 136 consisted of the installation of 135 lin. ft. of 1½ inch and 185 lin. ft. of 1 inch plastic pipe, necessary valves and drains, and fire hydrants and connection of this water supply line to the existing Museum of N. C. Minerals water system. This usable facility provides a potable water supply and fire protection at the Gillespie Gap Employee Residences.

Docket Information

Number of Documents in Docket 10

Documents Dated from 4/8/1959 to 10/23/1959

Docket Compiled: 2/1/2011