



# WATER-RIGHT DOCKET

## Blue Ridge Parkway

Docket No: 25

BENGE GAP MAINTENANCE AREA

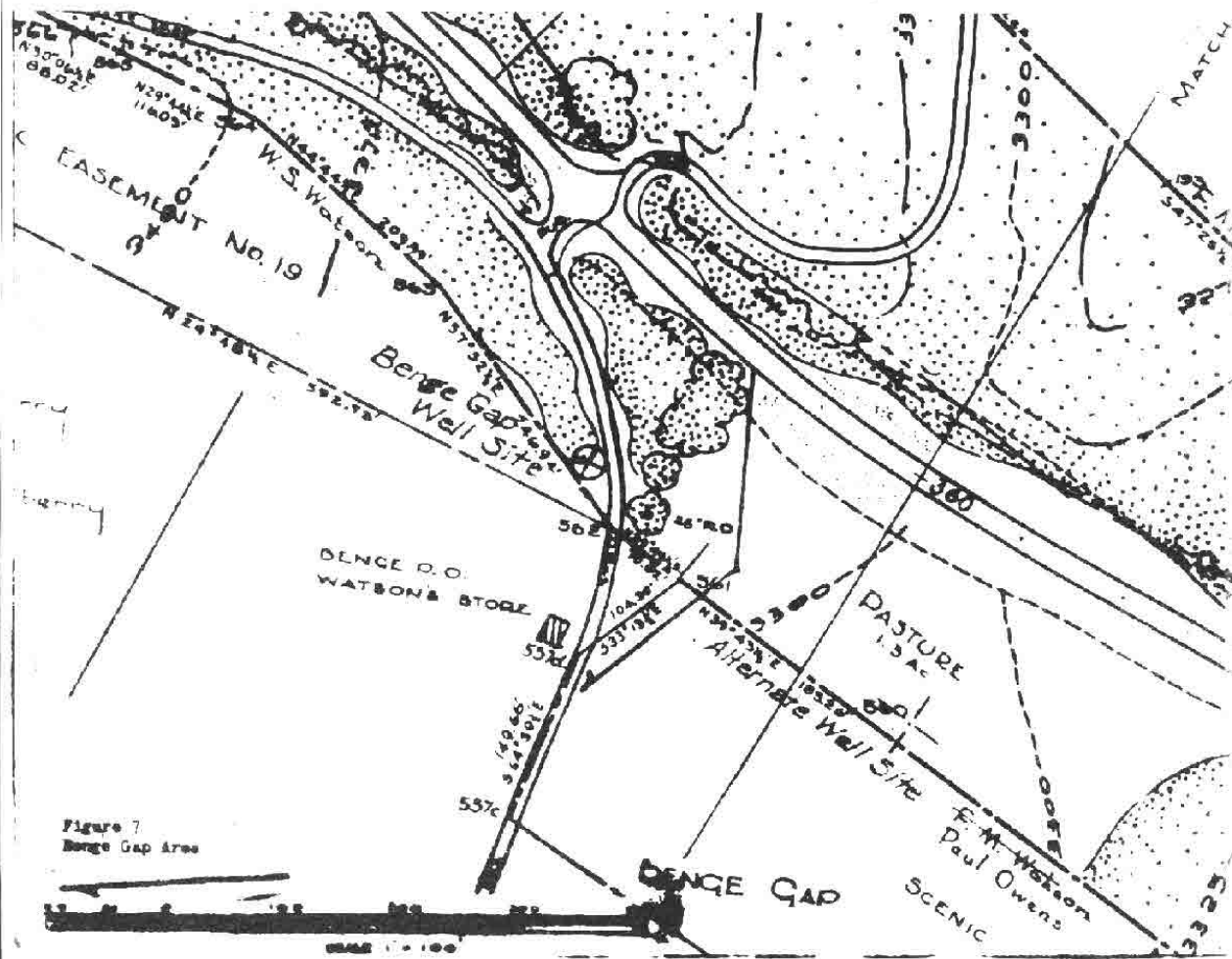
Supporting Hydro Data

00-00-0000: benge gap

### Benge Gap

Topography at Benge Gap is moderate west of the Parkway, but steepens on the dissected east front of the Blue Ridge. A broad, well-developed draw heads at the summit of the gap and dips to the northwest at a moderate gradient. About 300 feet northwest of the gap, the draw retains a perennial stream. The linear aspect of the draw suggests that it probably results from differential weathering of an underlying zone of permeable fractures. Metamorphic rocks underlying the Benge Gap area are well foliated mica gneiss and mica schist which strike N 60°-70° E and dips 40°-70° SE. Fracture systems strike N 60° W and N 60°-65° E. Wells in the vicinity of Benge Gap, west of the Parkway, obtain sufficient water for domestic use from depths of less than 100 feet.

A proposed test-well site was located west of the Parkway and about 130 feet east of Watson's Store in Benge Gap (figure 7). The required yield of the well is 10 gpm, and the estimated drilling depth is less than 200 feet in mica gneiss and mica schist. An alternate site was located about 350 feet south-southwest of the preferred site in the lowest part of the Parkway area west of Benge Gap. Estimated drilling depth at the alternate site is also less than 200 feet.





Benge Gap

Depth: 200 feet  
Casing: 38 feet  
Pump depth: 193 feet  
Static water level: 46.0 feet (measured)  
Yield: 4.0 gpm at 57°F

Fancy Gap

Depth: 126.5 feet  
Casing: 38 feet  
Pump depth: 118 feet  
Static water level: about 5 feet (reported)  
Yield: 8.0 gpm at 54°F

Groundhog Mountain

Depth: 302 feet  
Casing: 23 feet (reported)  
Diameter: 6 inch  
Pump depth: 200 feet (recommended)  
Static water level: 9.3 feet (measured)  
Yield: 1.38 gpm for 24 hours  
Remarks: Yield based on 24 hours calculation with maximum  
200 feet of drawdown.

Other Supporting Information

BLUE RIDGE PARKWAY

## WATER SYSTEM DATA

AREA BLUE RIDGE PARKWAY DATE COLLECTED \_\_\_\_\_ COLLECTED BY \_\_\_\_\_

1. Name of System: Benge Maintenance Area
2. Location: State North Carolina County Ashe General Area MP 268.0  
Reference to permanent landmark \_\_\_\_\_
3. Source of Supply: Well Capacity 4 gpm  
(Well, spring, stream, impoundment, etc.)
4. Type of System: Pneumatic  
(Pumped, gravity, etc.)
5. Treatment: None  
(Filtration, Chlorination, Airation, etc.)
6. Distribution Mains: Size 1-1/4" Length 798'; Size \_\_\_\_\_ Length \_\_\_\_\_  
Size \_\_\_\_\_ Length \_\_\_\_\_; Size \_\_\_\_\_ Length \_\_\_\_\_  
Size \_\_\_\_\_ Length \_\_\_\_\_; Size \_\_\_\_\_ Length \_\_\_\_\_
7. Pump Unit: Make Reda; Type Submersible; Model No. \_\_\_\_\_  
Serial No. \_\_\_\_\_; Outlet 1-1/4 in.; Inlet 1-3/4 in.  
(Size) (Size)
8. Power Source: Electric Motor: Make \_\_\_\_\_; HP 3/4;  
(Elec., gas, generator)  
Serial No. \_\_\_\_\_; Voltage 230; Amps 6.45;  
RPM 3450; Type Submersible; Phase Single;  
Cycles 60; Others \_\_\_\_\_; Stages \_\_\_\_\_
9. Control: Automatic Pressure; Manual \_\_\_\_\_;  
(Float, Electrode, Pressure, Time)  
Other \_\_\_\_\_  
(Explain)

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

11. Pump Housing: Type Const. Monitor Fittless; Size \_\_\_\_\_  
(Walls) (Roof)

12. Storage: Pneumatic; Type Const. Steel  
(Pneumatic, elevated, underground, etc.) (concrete, wood, steel)  
Size \_\_\_\_\_; Capacity \_\_\_\_\_; Inlet \_\_\_\_\_ ft. \_\_\_\_\_ in.  
(Elev.) (Size)  
Outlet \_\_\_\_\_ ft. \_\_\_\_\_ in.; Pressure Setting 60  
(Elev.) (Size) (if pneumatic)

13. Distribution: Water Closets 1; Lavatory 1; Urinal 1;  
Drinking Fountain 1; Hose Bibs 1; Residences \_\_\_\_\_;  
Other \_\_\_\_\_;

14. Metered or nonmetered: Nonmetered; No. \_\_\_\_\_; Size \_\_\_\_\_  
No. \_\_\_\_\_; Size \_\_\_\_\_  
No. \_\_\_\_\_; Size \_\_\_\_\_

15. Fire Protection: Fire Hydrants \_\_\_\_\_; Yard Hydrants 1

16. Water Analysis: Temp 57°;  $\text{SiO}_2$  19; Fe .03; Ca 1.9; Mg 1.5; Na 5.4;  
K .8;  $\text{HCO}_3$  26;  $\text{SO}_4$  .4; Cl 2.0;  $\text{NO}_3$  .9;  $\text{PO}_4$  .3; Hardness 11; Color 2;  
pH 7.0; Specific Conductance 40

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

## Docket Information

Number of Documents in Docket 6

Documents Dated from to

Docket Compiled: 2/1/2011