

**EXPLANATION**

**Introduction**

The area of this report includes that part of southwest Vermont drained by the Batten Kill (A), and the Walloomsac (B) and Hoosic (C) Rivers. This study is part of a cooperative program between the United States Geological Survey and the State of Vermont Department of Water Resources to provide a statewide reconnaissance of ground-water availability. Information presented in this report is based on a limited amount of data and is intended as a guide for local exploration, and not as a statement that conditions are uniform everywhere within a water favorability area. Further studies are recommended for a more detailed appraisal of ground-water availability.

**Water Favorability Areas**

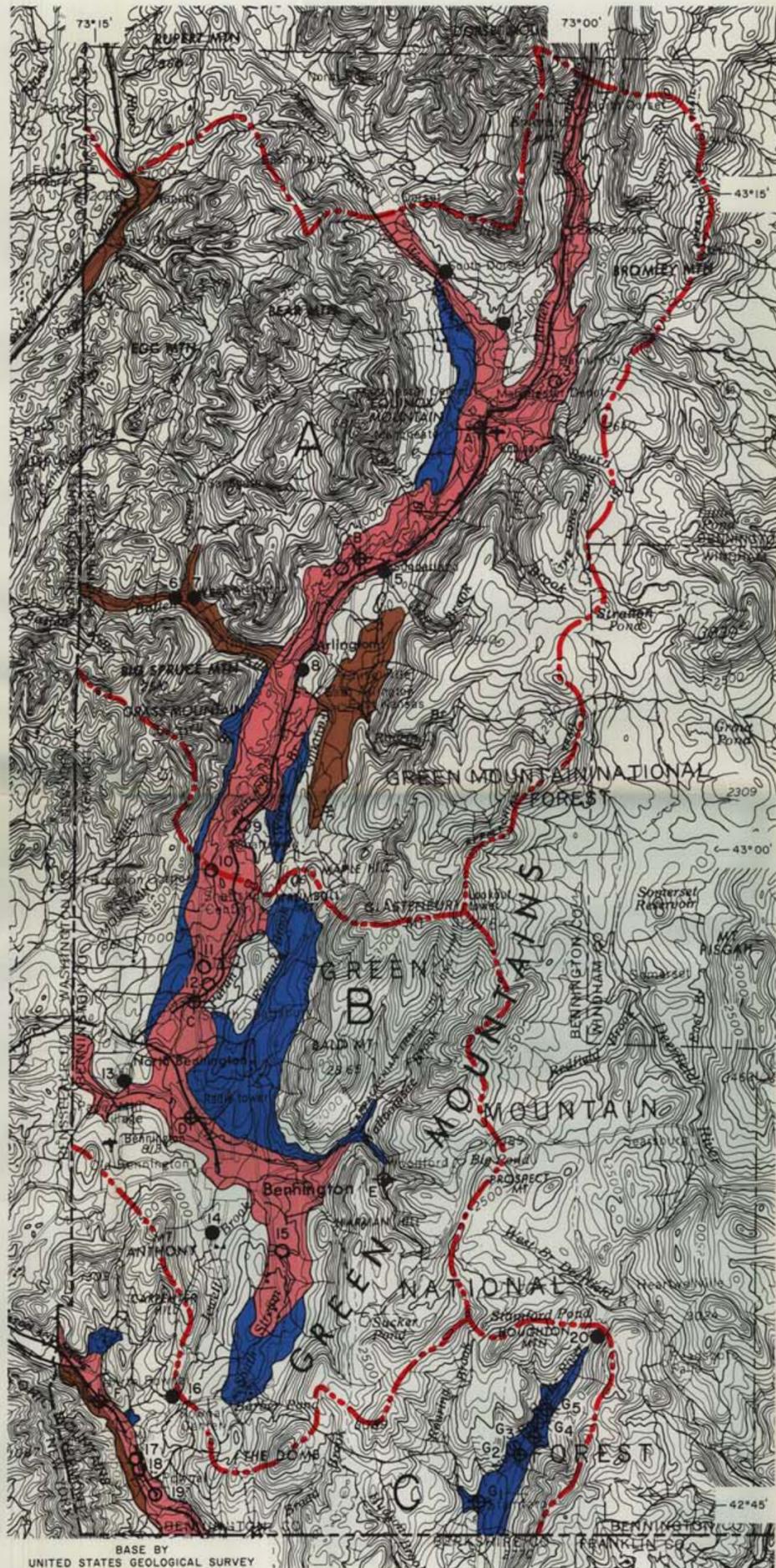
**Red Area:** Areas underlain by thick deposits of coarse-grained stratified glacial drift have excellent ground-water potential. Suitable for exploration to locate wells that should yield sufficient quantities of water to meet municipal and industrial requirements. Deposits are thinner and wells would be less productive along margins.

**Blue Area:** Areas underlain by thin deposits of coarse-grained stratified glacial drift and stream gravel have low to moderate ground-water potential. Suitable for exploration to locate shallow wells and infiltration galleries that should yield sufficient quantities of water for domestic, commercial, and light industrial use.

**Brown Area:** Areas underlain by fine-grained stratified glacial drift and swamp deposits have low ground-water potential. These deposits generally will yield sufficient water for domestic wells only. In places, thin lenses of gravel with higher yields may underlie these deposits, but these lenses may not have adequate storage or recharge to produce high yields on a sustained basis.

**White Area:** Areas underlain by deposits of unstratified glacial drift ("hardpan") and bedrock ("ledge") have low ground-water potential. In general, wells in either till or bedrock will yield only enough water for domestic or light commercial use. Till and bedrock underlie the stratified glacial drift of the map units listed above.

-  Water wells in stratified glacial drift
-  Water wells in glacial till and bedrock
-  Test borings
-  Basin boundary

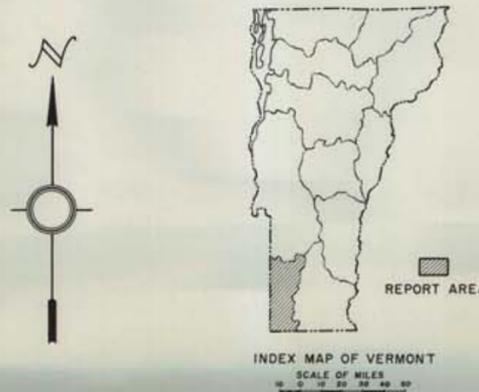


BASE BY UNITED STATES GEOLOGICAL SURVEY

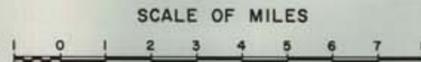
**Well and Test-Boring Data**

The well and test boring data listed in this report indicate a thick deposit of water-bearing sand and gravel between North Dorset and South Bennington along parts of the Batten Kill, Warm Brook, Paron Creek, Walloomsac River, and South Stream. The Hoosic River valley in the Fowal area also contains sufficient thicknesses of water-bearing gravel to produce large quantities of water. Nine wells producing water from gravel in these basins average 186 gpm (gallons per minute). In contrast, ten wells tapping bedrock and till aquifers in these basins average 32 gpm.

Areas underlain largely by silt and clay extend from Arlington to the New York State line along Batten Kill; from Kansas north toward Sunderland; and along the southwestern edge of the lower Hoosic River.



STATE OF VERMONT  
GROUND WATER FAVORABILITY MAP  
OF THE  
BATTEN KILL, WALLOOMSAC RIVER  
AND  
HOOSIC RIVER BASINS



PREPARED BY  
VERMONT DEPARTMENT OF WATER RESOURCES  
IN COOPERATION WITH  
UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
BY  
ARTHUR L. HODGES, JR.  
U. S. GEOLOGICAL SURVEY

1966

**WATER WELLS AND TEST BORINGS**

Number	Owner	Location	Total Depth (in ft)	1/ Depth to Bedrock (in ft)	Aquifer 1/	Yield 2/ (in gallons per minute)
1	John Stanard	South Dorset	55	8	Rock	20
2	Arthur Page	East Dorset	163	10	Rock	8
3	Avalanche Motor Lodge	Manchester	210	NR	Sand & Gravel	50
4	Sunderland Motel	Arlington	70	NR	Gravel	12
5	E. J. Beagle	Do	155	91	Rock	6
6	E. W. Finney	West Arlington	168	120	Rock	25
7	Ralph London	West Arlington	115	90	Rock	4
8	Mack Holding Co.	Arlington	204	20	Rock	90
9	Theresa Wood	Shaftsbury	48	NR	Clay ?	7
10	---	Shaftsbury	160	NR	Sand	30
11	Iron Kettle Motel	Shaftsbury	68	NR	Gravel	7
12	Dailey Gravel Co.	South Shaftsbury	90	NR	Gravel	250
13	Polygraphic Co. of America	North Bennington	198	0	Limestone	150
14	Monument Motors	Bennington	205	3	Rock	5
15	State of Vermont	Bennington	121	NR	Gravel	225
16	David Miles	Fowal Center	85	5	Rock	9
17	General Cable Co.	Fowal	55	NR	Sand & Gravel	125
18	Do	Do	58	NR	Gravel	230
19	Taconic Racing and Breeding Assn.	Do	76	NR	Sand & Gravel	750
20	Heartwellville Motel	Heartwellville	91	NR	Glacial till	6

NR - Not Reached 1/ Reported by owner 2/ May be limited by capacity of pump

**Test Borings (By Vermont Department of Highways)**

A.	Manchester Village - Union Street Bridge over Batten Kill River (0.8 mile E of Manchester Village)	Elevation	505 ft
	- East bank of river		
	- Sand, gravel, minor silt . . . . .	0 - 70 ft	
	- Refusal (possible bedrock) . . . . .	70 T.D.	
	- 30 ft N of E end of bridge		
	- Gravel, sand, some silt. . . . .	0 - 19 ft	
	- Silt & rock layers . . . . .	19 - 62	
	- Bedrock ? . . . . .	62 T.D.	
B.	Sunderland - SA #24 over Batten Kill River	Elevation	Not Known
	- Soil & Gravel . . . . .	0 - 4 ft	
	- Gravel . . . . .	4 - 14	
	- Clay . . . . .	14 - 17	
	- Fine sand & clay . . . . .	17 - 35	
	- Firm gravel . . . . .	35 - 42 T.D.	
	(Did not go to bedrock)		
C.	Shaftsbury - Route 67 over Paron Creek	Elevation	707 ft
	- Compact gravel, some sand & silt . . . . .	0 - 10 ft	
	- Loose silt . . . . .	10 - 14	
	- Very dense gravel, some sand, little silt . . . . .	14 - 28	
	- Very dense silt & sand, trace of gravel . . . . .	28 - 30 T.D.	
	(Did not go to bedrock)		
D.	Bennington - Route 67A over Furnace Brook	Elevation	588 ft
	- Gravel & sand . . . . .	0 - 11 ft	
	- Sand, some gravel . . . . .	11 - 43	
	- Silt, some sand, trace gravel . . . . .	43 - 60	
	- Gravel, some silt & sand . . . . .	60 - 75	
	- Silt, trace of sand . . . . .	75 - 78 T.D.	
	(Did not go to bedrock)		
E.	Woodford - Route 9 over City Stream	Elevation	1485 ft
	- Till . . . . .	0 - 11 T.D.	
	(Did not go to bedrock)		
F.	Fowal - bridge over Hoosic River W of North Fowal "Village Bridge"	Elevation	470 ft
	- Mud . . . . .	0 - 3 ft	
	- Coarse gravel . . . . .	3 - 6	
	- Medium yellow clay . . . . .	6 - 60	
	- Fine sand . . . . .	60 - 74	
	- Ledge . . . . .	74 T.D.	
G.	Stamford - Route 8, Massachusetts line to Heartwellville	Elevation	1132 ft
	G <sub>1</sub> Coarse gravel & boulders . . . . .	0 - 11½ T.D.	
	Did not go to refusal		
	G <sub>2</sub> Boulders . . . . .	0 - 9½ T.D.	
	Did not go to refusal		
	G <sub>3</sub> Boulders & roots . . . . .	0 - 4 ft	
	Sand & gravel . . . . .	4 - 18 T.D.	
	Did not go to refusal		
	G <sub>4</sub> Red sand . . . . .	0 - 13 ft	
	Clay & ground over ledge (?) . . . . .	13 - 14 T.D.	
	Elevation	1317 ft	
	G <sub>5</sub> Gravel . . . . .	0 - 8 ft	
	Sand & Gravel . . . . .	8 - 21	
	Ledge . . . . .	21 T.D.	
	Elevation	1370 ft	

T.D. - Total Depth