NEW ZEALAND GEOLOGICAL SURVEY

HYDROLOGY OF SAVAI'I

GEOLOGICAL MAP NO. 1 H. N.Z.G.S. BULLETIN NO. 63

1 : 100,000

FALEALUPO

Present Supply:

(W) Good spring at Falealupo-i-tai; otherwise springs salty at high tide

(D) Largely poor or brackish wells

Recommended Supply:

Well (drillhole) at 3, or well (less deep) at 3A Ⓐ

SATAUA-'AUALA

Present Supply:

(W) Good spring at Asau; otherwise springs salty at high tide

(D) Poor to bad tank and well supplies

Recommended Supply:

Deep well at 10 (deeper well at 10A if previous drilling suggests it might be feasible) Ⓒ

Second well at 11 if required Ⓒ

LETUI-SAFUNE-SAFOTU

Present Supply:

(W) Good coastal springs or pipes except Sasina (brackish) & Letui (inland)

(D) Paia, piped from stream; Letui tank, rationed; elsewhere coastal springs good or salty at high tide

Recommended Supply:

Well (5) at Letui Ⓑ; stream, then well, at Paia (6) Ⓒ; and possibly third well (7) towards Ologoga Ⓓ

FAGAMALO

Present Supply:

Piped supply from Vaipōuli River; inadequate, except at night, for eastern villages

Recommended Supply:

Repair dam and enlarge pipe Ⓑ; new well inland from Saleaula (13) Ⓒ

MAUGA

Present Supply:

Deep well, ? high in iron

Recommended Supply:

As at present, until water piped from Fagamalo or Patamea Ⓓ

PUNA-PATAMEA

Present Supply:

Piped supply from Mali'oli'o River to Patamea & Samalae'ulu. Other villages, coastal springs

Recommended Supply:

Develop Puna Spring (25) if dry-season flow warrants, and extend pipe to Papalaulelei Ⓓ

A'OPO & HIGH COUNTRY

Present Supply:

(W) Rain-pools etc.

(D) Tank at A'opo (leaking)

Recommended Supply:

Roof catchment (e.g. repair A'opo tank) Ⓐ

No other recommendations for high country at this stage.

NORTH FA'ASALELEAGA

Present Supply:

(W) Good or fair coastal springs & wells; Tank at Tuasivi

(D) Good at Tuasivi (tank), Faga (well), and Asaga (spring); elsewhere all coastal springs salty at high tide

Recommended Supply:

Pump Asaga estuary spring (2) subject to salinity & flow tests Ⓐ

WEST COAST

Present Supply:

Fair to bad and dangerous coastal springs, salty at high tide

Sala'ilua pipe, good for Sala'ilua always but for other villages only in wet season

Recommended Supply:

Well near Sala'ilua's reservoir (8) or nearer coast; and another (9) inland from Fagafau Ⓑ

UPPER LATA TO FALEATA RIVERS

Present Supply:

From rivers (not developed)

Recommended Supply:

Pipe from streams & rivers (26) Ⓓ

INLAND FA'ASALELEAGA

Present Supply:

Roof catchment at Vaiola (rationed); spring (poor, for drinking) at Tapu'ele'ele

Recommended Supply:

Well on 'Iva track (12) or at Vailoa (12A) or similar position Ⓒ

SOUTH FA'ASALELEAGA

Present Supply:

(W) Good to poor coastal springs

(D) Poor to bad coastal springs, salty at high tide

Recommended Supply:

Well (4) on 'Eve'eve to Vaiola track Ⓐ

SILI-PALAULI

Present Supply:

Lata River at Sili (? polluted for drinking); good spring at Papa; fair to poor spring at Gataivai; the rest a good pipeline (Palauli scheme)

Recommended Supply:

Obtain extra pipe water from Lata River and Faleata River (24) Ⓒ

TAGA

Present Supply:

Good coastal spring (inland area not developed)

Recommended Supply:

Village as at present; inland well (14) on track Ⓓ

TAFUA

Present Supply:

Good, but distant, spring

Recommended Supply:

Repair pipeline (23) Ⓑ

EXPLANATORY NOTES

(1) "Present Supply" for each area is based on observations at the end of the 1956 dry season. In many cases these observations have been subdivided into:—

Washing Water (W)

Drinking Water (D)

with more stringent standards (e.g. regarding salinity and pollution) in the latter category

(2) *"Recommended supply" is based upon the sources:—*

Proposed Wells ● 3

Intake Pipes, etc. ✕ 21

at the approximate positions shown. The numbers refer to those used in the scheme described in the text of the bulletin

(3) *Urgency is shown by the letters A to D in the following order*

Most urgent Ⓐ
Ⓑ
Ⓒ
Least urgent Ⓓ

Drawn by V. J. Stobbs and H. R. S. Stewart-Killick.

C. T. Webb, Chief Draughtsman

GENERAL REFERENCE

Geological boundary
Faults
Dip and Strike
Escarpments, cliffs
Centre of Eruption (commonly small crater)
Inland Springs
Coral reef
Limits of prominent lava flow within volcanic formation
Prominent swamps
Roads (vehicular)
Roads (non vehicular)
Tracks
Flowing Streams
Stream channels
Village — Vaitolo
Village (abandoned) — Mutia
Spot height in feet above Sea Level — 200'
Petrological samples (locality and number) — PT620
Phosphate samples — P 612

INDEX TO ADJOINING SHEET

MAP 1 — SAVAI'I; MAP 2 — 'UPOLU; TUTUILA; AUNUU; Pago Pago Naval Station; OFU; OLOSEGA; TAU; ROSE; MANUA GROUP

SCALE

1 : 100,000

0 1 2 3 4 5 MILES

R. W. Willett, Director

Compiled from data obtained from the Lands & Survey Department Apia Western Samoa
Additional Surveys and Geology by D. Kear, and B. L. Wood, New Zealand Geological Survey, and S. Poutoa, Public Works Department, Apia Some geological boundaries from soil survey of A. C. S. Wright, New Zealand Soil Bureau, 1956
Published by the Department of Scientific and Industrial Research 1958
R. E. Owen, Government Printer, Wellington, New Zealand

GEOLOGICAL LEGEND

	SEDIMENTARY ROCKS AND MARINE TUFF		VOLCANIC FORMATIONS		CONES
HOLOCENE	Alluvium Swamp talus etc. (including some Tafagamanu sand)	R	Aopo Volcanics (historical)	A	a
	Tafagamanu Sand (coastal strip of coral sand about 5 ft. above sea level)	T	Puapua Volcanics (reef-covering)	P	p
	Nu'utele Sand (coral sand 15 ft. above sea level)	N	Lefaga Volcanics (narrow reefs offshore) *	L	l
MIDDLE AND LATE PLEISTOCENE	Lalomauga Alluvium (terrace gravels in Falefa Valley) *	LA	Mulifanua Volcanics (wide reefs offshore)	M	m
	Talus from Fagaloa Volcanics *	Ft	Salani Volcanics (wide reefs, deep soils, canyons)	S	s
	Vini Tuff (palagonite tuff of eastern islands and Apolima Island)	V			
EARLY PLEISTOCENE OR PLIOCENE			Fagaloa Volcanics (steep eroded relief, deep soils, drowned coasts, narrow reefs)	F	

* None on this sheet

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