SOIL MAP

SAVAII SHEET 3

1:50,000

WESTERN SAMOA LAND RESOURCES PLANNING PROJECT 1989

GENERAL MAP INFORMATION

SCALE

KILOMETRES 0 1 2 3 4 5 6 7

MILES 0 1 2 3 4 5

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TOPOGRAPHICAL LEGEND

Populated Places: Town ..... APIA
Villages ..... Savaia
Roads
Coastline, Rivers and Streams
Contours 50
General features ..... Cape Tulivae

Note: The contour interval varies to improve definition of coastal lowlands. First contour : 50 feet. Second contour : 150 feet. Third contour: 250 feet. Thereafter every 250 feet to 2000 feet. Over 2000 feet: every 500 feet (UPOLU), every 250 feet (SAVAII).

GENERAL NOTES

This map is a digital product derived from the Western Samoa Geographical Information System (GIS) database, which is available in plotout format at other scales and sheet-lines.
Topographical data for this map has been digitised from the NZMS 174 1:20000 Topographical series of Western Samoa and generalised to a prime operational scale of 1:50000.
The sheetlines and grid conform to the new 1:50000 Topographical Series under production in the Department of Lands & Survey, Apia.

Projection: Cassini-Soldner. Grid: UTM.

TRUE MAGNETIC

MEAN MAGNETIC VARIATION FOR WESTERN SAMOA 12°30'E WITH ANNUAL INCREASE 2'

This map is published under the authority of Lealiifano J.T. Soon, Director of Lands & Survey, Government of Western Samoa as part of the Asian Development Bank and United Nations Development Programme jointly funded Land Resource Planning Project carried out by ANZDEC Ltd in association with the Division of Land and Soil Science, Department of Scientific and Industrial Research, New Zealand.

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CLASSIFICATION OF SOIL SERIES ACCORDING TO SOIL TAXONOMY

Order	Group	Subgroup	Soil series	Soil families included in the series	Map symbols
Histosols	Tropofibrists	Hydric Fluvaquentic	Lalovi Latalua	dysic, isohyperthermic euic, isohyperthermic	7 8
Andisols	Fulvudand	Lithic	Sataua	medial-skeletal, amorphic, isohyperthermic	24,24a,24H
		Lithic	Samoa	medial-skeletal, amorphic, isothermic	77
		Hydric Pachic	Maugamoa	medial-skeletal, amorphic, isothermic	75, 75H
		Hydric Pachic	Sava'i'i	hydrous-skeletal, amorphic, isothermic	76b
		Hydric Pachic	Salega	hydrous-skeletal, amorphic, isothermic	79, 79H
		Pachic	Vaisala	hydrous-amorphic, isothermic	23, 23H
		Pachic	Mafane	medial-skeletal, amorphic, isohyperthermic	76S
		Pachic	Lanuto'o	medial-skeletal, amorphic, isothermic	84H, 84S, 84V
		Eutric	Oto	medial-skeletal, amorphic, isothermic	84H
		Eutric	Fa'amasa	medial-skeletal, amorphic, isohyperthermic	43H,43S,43V
		Acric	Atua	medial-skeletal, amorphic, isohyperthermic	44H, 44S, 44V
		Acric	Caegae	medial-skeletal, amorphic, isohyperthermic	42, 42H
		Acric	Mata'ana	medial, amorphic, isothermic	49, 49a, 49H
		Typic	Otomanu	medial, amorphic, isohyperthermic	96S
		Typic	Lefaga	medial-skeletal, amorphic, isohyperthermic	30H, 30S 40, 40a, 40H
	Hapludand	Lithic	Togitogiga	medial-skeletal, amorphic, isohyperthermic	35, 35a, 35H
			Tanumalala	medial over fragmental, amorphic, isohyperthermic	
		Alic	Puna	medial-skeletal, amorphic, isohyperthermic	41a, 41b, 41H
		Hydric	Tanutala	medial-skeletal, amorphic, isohyperthermic	38, 38H
			Sili	hydrous-skeletal, amorphic, isothermic	39H, 39S
			Maugasili	hydrous-skeletal, amorphic, isothermic	81
		Eutric	Alataua	medial-skeletal, amorphic, isohyperthermic	82H, 82S
			Netafu	medial-skeletal, amorphic, isohyperthermic	22H, 22S
			Tafua	medial, amorphic, isohyperthermic	26H, 26S
			Folu	medial over fragmental, amorphic, isohyperthermic	32, 32H 53S
		Acric	Tanumalala	medial-skeletal, amorphic, isohyperthermic	41
		Oxic	Tiotala	medial over clayey-skeletal, amorphic, isohyperthermic	57H, 57S, 57V
			Fagapolo	medial over clayey-skeletal, amorphic, isohyperthermic	56
		Typic	Mulifanua	medial-skeletal, amorphic, isohyperthermic	27H, 27S, 27V
			Magia	medial-skeletal, amorphic, isohyperthermic	28, 28a
			Tapuele	medial over skeletal, amorphic, isohyperthermic	45
			Upolu	medial-skeletal, amorphic, isohyperthermic (lithic subgroups on very steep slopes)	69H, 69S, 69V
			Eletoga	medial-skeletal, amorphic, isothermic	80H, 80S
Oxisols	Acroperox	Anionic	Fagaga	coarse silty, ferruginous, isohyperthermic	65
		Anionic, humic	Tuave	clayey, ferruginous, isohyperthermic	70, 70H
	Haploperox	Humic	Papaloa	clayey, kaolinitic, isohyperthermic	66H, 66S, 66V
		Typic	Luatuanu'u	clayey, kaolinitic, isohyperthermic	68, 68a, 68H
	Acrudox	Anionic	Vaipouli	clayey, gibbsitic, isohyperthermic	33
Mollisols	Hapludoll	Cumulic	Apia	fine, oxidic, isohyperthermic	5
		Fluventic	Saunlatu	fine loamy over sandy, oxidic, isohyperthermic	9, 9a, 9b
		Andic	Sasina	medial-skeletal, oxidic, isohyperthermic	21, 21H
		Lithic	Aopo	fragmental, mixed, isohyperthermic	18, 18H
			Tapuele	sandy-skeletal, mixed, isohyperthermic	
			Falealupu	loamy-skeletal, oxidic, isohyperthermic	19, 19a
		Lithic (andic)	Pulea	clayey-skeletal, mixed (amorphic) isohyperthermic	20
		Lithic	Vaipapa	fine, oxidic, isohyperthermic	34H, 34S
			Matatoleafi	sandy-skeletal, mixed, isothermic	73, 73a, 73H
			Mu	fragmental, mixed, isothermic	74, 74H
Inceptisols	Tropaquept	Lithic	Namoa	clayey-skeletal, mixed, nonacid, isohyperthermic	6b
		Typic	Namoa	fine, mixed, nonacid, isohyperthermic	6a
			Vaigafa	fine, mixed, nonacid, isohyperthermic	13
			Lano	fine silty, mixed, nonacid, isohyperthermic	14
			Palapala	fine, ferritic, acid, isothermic	16
	Humitropept	Andic	Ma'asina	medial-skeletal, oxidic, isohyperthermic	12,12a,12b,12H
			Aleisa	medial-skeletal, oxidic, isohyperthermic	47, 47a, 47H
			Fagaga	medial-skeletal, oxidic, isohyperthermic	65a, 65b, 65H
			Tlavi	medial-skeletal, oxidic, isothermic	85, 85a, 85b, 85H
		Fluventic (Andic)	Vaiola	fine, oxidic, isohyperthermic	10
		Fluventic	Falevao	fine, oxidic, isohyperthermic	11, 11a
		Lithic	A'ana	clayey-skeletal, oxidic, isohyperthermic	29c
		Oxic	A'ana	clayey-skeletal, oxidic, isohyperthermic	29a, 29b, 29H
			Vailele	fine, oxidic, isohyperthermic	29
			Moamoa	clayey-skeletal, oxidic, isohyperthermic	31
			Asoleilei	clayey-skeletal, gibbsitic, isohyperthermic	32
			Tafatafa	fine, oxidic, isohyperthermic	37, 37H
				clayey-skeletal, oxidic, isohyperthermic (also Lithic subgroups)	46a, 46b, 46H
			Avele	clayey over loamy-skeletal, gibbsitic, isohyperthermic	59
				clayey-skeletal, gibbsitic, isohyperthermic	59a, 59b, 59H
			Solosolo	fine, gibbsitic, isohyperthermic	60, 60a
			Ebenuli	fine, gibbsitic, isohyperthermic	62
				clayey-skeletal, gibbsitic, isohyperthermic	62a, 62b, 62H
			Aleipata	loamy-skeletal, oxidic, isohyperthermic	63H, 63S, 63V
			Falealili	clayey-skeletal, oxidic, isohyperthermic	64,64a,64b,64H
			Afamalu	clayey-skeletal, gibbsitic, isothermic	83, 83H
		Typic	Papauta	fine, oxidic, isohyperthermic	58
				clayey-skeletal, oxidic, isohyperthermic	58a, 58b, 58H
	Eutropept	Typic	Vini	fine, smectitic, isohyperthermic	50, 50H
			Nu'utele	fine, smectitic, isohyperthermic (also Lithic subgroups)	51H, 51S, 51V
			Mulimauga	fine, oxidic, isohyperthermic	54H, 54S
			Olomauga	fine, oxidic, isohyperthermic	55, 55H
			Salaifua	medial-skeletal, oxidic, isohyperthermic	48, 48a, 48H
	Dystropept	Andic	Lata	medial-skeletal, oxidic, isohyperthermic (also Lithic subgroups)	71H, 71S, 71V
		Oxic	Saleimoa	coarse loamy, gibbsitic, isohyperthermic	25
				clayey-skeletal, gibbsitic, isohyperthermic	25a, 25H
			Sauaga	fine, halloysitic, isohyperthermic	67, 67H
			Uafato	fine, mixed, isohyperthermic	72, 72H
		Typic	Afuiva	loamy-skeletal, oxidic, isohyperthermic	36, 36H
			Salani	fine, gibbsitic, isohyperthermic	61H, 61S, 61V
Entisols	Sulfaquent	Typic	Loga	fine, mixed nonacid, isohyperthermic	1, 1a
	Tropopsamment	Aquic	Mutiatele	carbonatic, isohyperthermic	4, 4a
		Typic	Luifi	mixed, isohyperthermic	2, 2a
			Fusi	carbonatic, isohyperthermic (also Lithic subgroups)	3, 3a 3b
	Troporthent	Lithic	Matavanu	fragmental, mixed, nonacid, isohyperthermic	17, 17a, 17H

Soil Taxonomy interpreted from recent and existing data by W.C. Rijkse, 1989

SOIL MAPPING UNITS ARRANGED PHYSIOGRAPHICALLY

SOILS OF THE COASTLANDS, VALLEY FLOORS AND THEIR MARGINS

from saline estuarine sand and clay
- Loga sandy clay .. 1
- Loga peaty sand .. 1a

from basaltic beach sand
- Luli sand .. 2
- Luli gravelly sand .. 2a

from calcerous sand
- Fusi sand .. 3
- Fusi shallow grey sand over basalt .. 3a
- Fusi stony and bouldery sand and stony clay .. 3b
- Mutiatele mottled sand .. 4
- Mutiatele peaty loamy sand and sandy peat .. 4a

from estuarine sediments and organic residue
- Apia silty clay .. 5
- Namoa clay loam .. 6
- Namoa peaty silt loam .. 6a
- Namoa shallow peaty clay over basalt .. 6b

from organic residues
- Lalovi peat .. 7
- Latalua loamy peat .. 8

from basic alluvium
- Saunlatu gravelly sandy clay loam .. 9
- Saunlatu silty clay loam .. 9a
- Saunlatu loamy sand .. 9b
- Vaiola silty clay loam and gravelly loam .. 10
- Falevao silty clay loam .. 11
- Falevao slightly mottled silty clay loam .. 11a

from basic colluvium
- Ma'asina stony clay .. 12
- Ma'asina stony and bouldery clay .. 12a
- Ma'asina very bouldery clay .. 12b
- Ma'asina hill soils .. 12H
- Vaigafa silty clay loam .. 13
- Lano silty clay loam and peaty clay loam .. 14

from any parent material
- Man made soils .. 15

from recent alluvium, colluvium and organic residue
- Palapala peaty loam .. 16

SOILS OF THE LOWLANDS AND FOOTHILLS

(i) with weak to strong dry season (udic moisture regime)

1. Soils of the very slightly dissected landscapes

from mainly pahoehoe basalt of the Aopo Volcanics
- Matavanu sandy and fine gravel .. 17
- Matavanu stony gravel .. 17a
- Matavanu hill soils .. 17H

from mixed pahoehoe and aa basalt of the Aopo Volcanics
- Aopo loamy sand .. 18
- Aopo hill soils .. 18H

from mainly pahoehoe basalt of the Puapua Volcanics
- Falealupo very bouldery silty clay loam .. 19
- Falealupo very bouldery silty clay loam, peaty phase .. 19A
- Pulea very bouldery silt loam .. 20
- Sasina very stony and bouldery silty clay loam .. 21
- Sasina hill soils .. 21H

from mainly scoria of the Puapua volcanics
- Alataua hill soils .. 22H
- Alataua steepland soils .. 22S

2. Soils of the slightly dissected landscapes

from aa, scoria and pahoehoe basalt of the Mulifanua Volcanics
- Vaisala very stony silt loam .. 23
- Vaisala hill soils .. 23H
- Satoa very stony silty clay loam .. 24
- Satoa very bouldery silty clay loam .. 24a
- Satoa hill soils .. 24H
- Saleimoa very stony silty clay loam .. 25
- Saleimoa very bouldery silty clay loam .. 25a
- Saleimoa hill soils .. 25H

from scoria and basalt of the Mulifanua Volcanics
- Neiafu hill soils .. 26H
- Neiafu steepland soils .. 26S
- Mulifanua hill soils .. 27H
- Mulifanua steepland soils .. 27S
- Mulifanua steepland soils, very steep phase .. 27V

from mixed aa and pahoehoe basalt of the Mulifanua Volcanics
- Magia stony clay loam .. 28
- Magia bouldery clay loam .. 28a
- A'ana stony silty clay .. 29
- A'ana very stony silty clay loam .. 29a
- A'ana bouldery silty clay .. 29b
- A'ana shallow bouldery silty clay loam .. 29c
- A'ana hill soils .. 29H

3. Soils of the moderately dissected landscapes

from scoria basalt of the Salani Volcanics
- Olomanu hill soils .. 30H
- Olomanu steepland soils .. 30S

from mixed pahoehoe and aa basalt of the Salani Volcanics
- Valele stony silty clay loam .. 31

from mainly pahoehoe basalt of the Salani Volcanics
- Moamoa stony clay .. 32

4. Soils of the strongly dissected landscapes

from pahoehoe, aa, scoria and dykes of basalt of the Fagaloa Volcanics
- Vaipouli silty clay loam .. 33
- Vaipapa hill soils .. 34H
- Vaipapa steepland soils .. 34S

(ii) without dry season (perudic moisture regime)

1. Soils of the very slightly dissected landscapes

from mainly pahoehoe basalt of the Puapua Volcanics
- Togitogiga very bouldery silty clay loam .. 35
- Togitogiga very stony humic silt loam .. 35a
- Togitogiga hill soils .. 35H
- Afuiva very bouldery silt loam .. 36
- Afuiva hill soils .. 36H
- Asoleilei stony silt loam .. 37
- Asoleilei hill soils .. 37H

from mainly scoria basalt of the Puapua Volcanics
- Puna gravelly clay loam .. 38
- Puna hill soils .. 38H
- Tanutala hill soils .. 39H
- Tanutala steepland soils .. 39S

2. Soils of the slightly dissected landscapes

from aa, scoria and pahoehoe basalt of the Lefaga Volcanics
- Lefaga stony silty clay loam .. 40
- Lefaga bouldery silty clay loam .. 40a
- Lefaga hill soils .. 40H
- Tanumalala stony silty clay loam .. 41
- Tanumalala very stony silty clay loam .. 41a
- Tanumalala very bouldery silt loam .. 41b
- Tanumalala hill soils .. 41H
- Atua very bouldery silty clay loam .. 42
- Atua hill soils .. 42H

from scoria basalt of the Mulifanua Volcanics
- Olo hill soils .. 43H
- Olo steepland soils .. 43S
- Olo steepland soils, very steep phase .. 43V
- Fa'amasa hill soils .. 44H
- Fa'amasa steepland soils .. 44S
- Fa'amasa steepland soils, very steep phase .. 44V
- Tapuele silty clay .. 45

from mixed aa and pahoehoe basalt of the Mulifanua Volcanics
- Tafatafa very stony silty clay loam .. 46
- Tafatafa bouldery silty clay loam .. 46a
- Tafatafa very bouldery silty clay loam .. 46b
- Tafatafa hill soils .. 46H
- Aleisa very stony silty clay loam .. 47
- Aleisa very bouldery silty clay loam .. 47a
- Aleisa hill soils .. 47H
- Salaiava very stony silty clay loam .. 48
- Salaiava bouldery silty clay .. 48a
- Salaiava hill soils .. 48H
- Gaegae very stony silty clay loam .. 49
- Gaegae very bouldery silty clay loam .. 49a
- Gaegae hill soils .. 49H

3. Soils of the moderately dissected landscapes

from calcareous lithic tuffs of the Vini Volcanics
- Vini clay .. 50
- Vini hill soils .. 50H
- Nu'utele hill soils .. 51H
- Nu'utele steepland soils .. 51S
- Nu'utele steepland soils, very steep phase .. 51V

from lithivitric tuffs and ash of the Vini Volcanics
- Tafua silty clay loam .. 52
- Tafua hill soils .. 52H
- Folu steepland soils .. 52S

from scoria of the Mulifanua and Salani Volcanics
- Mulimauga hill soils .. 54H
- Mulimauga steepland soils .. 54S
- Olomauga stony silty clay .. 55
- Olomauga hill soils .. 55H
- Fagapolo silty clay .. 56
- Tiotala hill soils .. 57H
- Tiotala steepland soils .. 57S
- Tiotala steepland soils, very steep phase .. 57V

from mixed pahoehoe and aa of the Salani Volcanics
- Papauta silty clay .. 58
- Papauta stony silty clay .. 58a
- Papauta bouldery silty clay .. 58b
- Papauta hill soils .. 58H
- Avele stony silty clay loam .. 59
- Avele very stony silty clay loam .. 59a
- Avele bouldery silty clay loam .. 59b
- Avele hill soils .. 59H
- Solosolo silty clay loam .. 60
- Solosolo stony and bouldery clay .. 60a
- Salani hill soils .. 61H
- Salani steepland soils .. 61S
- Salani steepland soils, very steep phase .. 61V
- Eternuli silty clay loam .. 62
- Eternuli very stony silty clay loam .. 62a
- Eternuli very bouldery silty clay loam .. 62b
- Eternuli hill soils .. 62H

from mainly pahoehoe of the Salani Volcanics
- Aleipata hill soils .. 63H
- Aleipata steepland soils .. 63S
- Aleipata steepland soils, very steep phase .. 63V
- Falealili silty clay loam .. 64
- Falealili stony silty clay loam .. 64a
- Falealili very stony silty clay loam .. 64b
- Falealili hill soils .. 64H
- Fagaga silty clay loam .. 65
- Fagaga stony silty clay loam .. 65a
- Fagaga very stony silty clay loam .. 65b
- Fagaga hill soils .. 65H

4. Soils of the strongly dissected landscapes

from pahoehoe, aa, scoria and dykes of basalt of the Fagaloa Volcanics
- Papaloa hill soils .. 66H
- Papaloa steepland soils .. 66S
- Papaloa steepland soils, very steep phase .. 66V
- Sauaga clay .. 67
- Sauaga hill soils .. 67H
- Luatuanu'u clay .. 68
- Luatanu'u clay, eroded phase .. 68a
- Luatanu'u hill soils .. 68H
- Upolu hill soils .. 69H
- Upolu steepland soils .. 69S
- Upolu steepland soils, very steep phase .. 69V
- Tuave clay .. 70
- Tuave hill soils .. 70H

from pahoehoe, aa, and dykes of basalt of the Fagaloa volcanics
- Lata hill soils .. 71H
- Lata steepland soils .. 71S
- Lata steepland soils, very steep phase .. 71V
- Uafato silty clay .. 72
- Uafato hill soils .. 72H

SOILS OF THE UPLANDS

1. Soils of the very slightly dissected landscapes

from mainly pahoehoe basalt of the Aopo Volcanics
- Mataoleafi gravelly sand .. 73
- Mataoleafi gravel .. 73a
- Mataoleafi hill soils .. 73H

from mixed aa and pahoehoe basalt of the Aopo Volcanics
- Mu gravel .. 74
- Mu hill soils .. 74H

from scoria and pahoehoe basalt of the Puapua Volcanics
- Maugamoa very bouldery peaty silt loam .. 75
- Maugamoa hill soils .. 75H
- Mafane steepland soils .. 76S
- Samoa gravelly bouldery loam .. 77
- Sava'i steepland soils .. 78S

2. Soils of the slightly dissected landscapes

from aa, scoria and pahoehoe basalt of the Mulifanua Volcanics
- Salega humic stony silt loam .. 79
- Salega hill soils .. 79H
- Elitoga hill soils .. 80H
- Elitoga steepland soils .. 80S
- Sili stony loam .. 81
- Maugasili hill soils .. 82H
- Maugasili steepland soils .. 82S

3. Soils of the moderately dissected landscapes

from scoria basalt of the Salani Volcanics
- Afamalu silt loam .. 83
- Afamalu hill soils .. 83H
- Lanuto'o hill soils .. 84H
- Lanuto'o steepland soils .. 84S
- Lanuto'o steepland soils, very steep phase .. 84V

from mixed aa and pahoehoe basalt of the Salani Volcanics
- Tiavi silty clay loam .. 85
- Tiavi stony silty clay loam .. 85a
- Tiavi stony and bouldary silty clay loam .. 85b
- Tiavi hill soils .. 85H

from scoria, pahoehoe and aa basalt of the Salani Volcanics
- Mata ana peaty loam .. 86S

Soil information on this map is based on surveys by A.C.S. Wright (N.Z. D.S.I.R. Soil Bulletin 22, 1963) and subsequent surveys by W.C. Rijkse and M. McLeod 1989.