

## C-2-e. Shallow Soil / Lava Benchmark System Worksheet

1	STATE	Hawaii
2	FIELD OFFICE	Kealahou and Hilo
3	MLRA	161
4	COMMON RESOURCE AREA (CRA)	<b>Shallow Soil/Lava</b>
5	RESOURCE INTERPRETATIONS	<i>see Section II FOTG for interpretations</i>
5.1	SOIL	Hawaii - Lava flows association Kainaliu-Honuauulu association Kekake – Kei – Kiloa association
5.2	WATER	Not Available
5.3	AIR	Not Available
5.4	PLANT	Not Available
5.5	ANIMAL	Not Available
5.6	HUMAN	Not Available
6	HYDROLOGIC UNIT	20010000
7	SYSTEM TEMPLATE LABEL	<b>SSA00</b>
8	SYSTEM NAME	<b>Shallow Soil/Lava, Benchmark</b>
9	PLANNING PHASE	Benchmark
10	PLANNING LEVEL	Not Applicable
11	NRCS LANDUSE	CROP/NPAS
12	EXISTING CONSERVATION PRACTICES	
		1. None 2. 3. 4. 5.
13	SYSTEM NARRATIVE	
	Representative Areas:	Hawaii – Keahole to Ocean View, Ka’u and Puna.
	Land Use:	Cropland - Orchards (coffee and macadamia nuts), nursery, truck crop, and ornamental crop operations. Naturalized Pasture - Livestock grazing on naturalized pasture. Other - Selective harvesting of forestry products. One aquaculture operation in Keahole.
	Topography:	Flat to steep, complex slopes.
	Soils:	<u>Lava flows association</u> : Gently sloping to steep, excessively drained, nearly barren lava flows; on uplands. <u>Kainaliu-Honuauulu association</u> : Moderately deep volcanic ash soils over a’ a lava. <u>Kekake – Kei – Kiloa association</u> : Very shallow, gently sloping to steep, well drained organic soils over a’ a or pahoehoe lava; on uplands.
	Rainfall:	15 - 80” per year in Kona; 20 – 30” per year in Ka’u; and 80 – 160” per year in Puna.
	Special Conditions:	Complex rocky lava land. Undefined natural watercourses/outlets.

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14	RESOURCE CONCERNS	MAGNITUDE/EFFECTS
	1. Soil / Erosion / Ephemeral Gully	1. Gullies develop after rainfall events.
	2. Soil / Erosion / Classic Gully	2. Gullies are increasing in depth and width.
	3. Soil / Erosion / Streambank Erosion	3. Stream banks and bottoms are not stabilized.
	4. Soil / Condition / Tilth, Crusting, Infiltration, Organic Matter	4. Soil contains little organic matter. Water infiltration is reduced.
	5. Water / Quantity / Runoff/Flooding	5. Floodwater and ponding cause damage to cropland and residential areas.
	6. Water / Quantity / Soil Saturation	6. Water table is near surface of the soil.
	7. Water / Quantity / Inadequate Outlets	7. Natural waterways and outlets are undefined.
	8. Water / Quantity / Irrigation Water Management	8. Distribution and application of existing water supplies are ineffective.
	9. Water / Quality / Pesticides in Groundwater	9. Pesticides have been detected by DOH in some groundwater wells.
	10. Water / Quality / Nutrients & Organics in Groundwater	10. Nutrients have been detected in some groundwater resources.
	11. Water / Quality / Nutrients & Organics in Surface Water	11. According to DOH reports, state water quality standards have been exceeded for nutrients in some coastal waters.
	12. Water / Quality / Suspended Sediment & Turbidity in Surface Water	12. According to DOH reports, state water quality standards have been exceeded for turbidity in some coastal waters.
	13. Plant / Condition / Productivity	13. Desired grasses are overgrazed.
	14. Plant / Management / Threatened & Endangered Species	14. Threatened and endangered plants are found growing on the property.
	15. Animal / Habitat / Domestic Animal Water Requirements	15. Water supply and distribution is inadequate and inefficient.
	16. Animal / Habitat / Threatened & Endangered Species	16. Some areas on the property are habitat for threatened and endangered animals.