



Note: Recharge potentials for the shallow aquifer are estimated on basis of the intrinsic properties (refer to footnotes 2 and 3) that describe the water transmitting and storage capabilities of the various soils. The occurrence of recharge to the shallow aquifer also requires that there be soil space available, above the water table, for transitory storage of the recharge water; occurrence of recharge to the Floridian aquifer additionally requires that the prevailing water-table altitude be higher than the Floridian potentiometric surface, and that intervening materials between the shallow and Floridian aquifers be permeable. Thus, in effectively using sheet 7 as a recharge map, it should be compared with sheets 3 and 5.

COCOA QUADRANGLE, FLORIDA
1949, PHOTOREVISED 1970,
7.5-minute series, 1:24000

Map Pattern	Soil series ↓	Permeability (in/h) ↓, 2	Available Water Capacity ↓, 3 (in/in of soil)	Recharge Potential (estimated)
	Co-Cc (Conover) Go (Galveston) Or (Orsino) Pb (Palm Beach) Pb-Pfd-Ph (Pooles) Sa (Satellite) Sfb-Sfd (St. Lucie) We (Weisha) Bs (Basinger) Pw (Pompano) Sb (St. Johns) Ta (Tavares) Va (Valkaria) As-At (Astafula)	more than 20 more than 20	0.02-0.05 0.02-0.05 0.03-0.07 0.03-0.08 0.03-0.08 0.03-0.08 0.05-0.10	excellent excellent
	Co (Coco) Ps-Pu (Pomello) An (Anclote) Eq (Eau Gallie) Cp (Copeland) Eu-Ew (Eau Gallie) Tc (Terra Ceia) Ho (Hooper) Prn-Pn (Pinella) Pp (Pinella dark surface grad.) Od (Oldsmar)	6-20 6-20 2-6 2-6	0.02-0.05 0.02-0.05 0.05-0.10 0.05-0.10 0.10-0.15 0.10-0.15 0.20-0.25 0.10-0.15 0.10-0.15 0.10-0.15 0.10-0.15 0.10-0.15	good to very good good to very good
	Fa-Fd (Felda) Im (Immokalee) Ma (Malabar) Mu-Mk (Myakka) Pk (Parkwood) Sc (St. Johns)	6-6 6-6 6-2 6-2 6-2 6-2	0.01-0.05 0.01-0.05 0.01-0.05 0.01-0.05 0.01-0.05 0.01-0.05	poor poor
	Fe-Fo (Felda) Mc (Micco) Br (Bradenton) Tw (Tonoka) Ch (Chobe) Fn-Fo (Floridana) Mb (Malabar) Me (Monverte) Cd (Canova) Mp (Myakka) Wa (Wabasso) Wn (Winder)	6-6 6-6 6-6 6-6 6-2 6-2	10-15 10-15 15-20 10-25 10-15 10-15	poor poor
	Sw (Swamp)		Usually includes areas classed for water retention. Permeabilities vary but are considered low.	poor
	Ck (coastal beaches) Tm (tidal marsh) Ts (tidal swamp)		Affected by ocean tides and salt water intrusion. There is little fresh-water recharge to any shallow water-bearing zone.	poor
	Sp (spoil bank) Ur (urban land) Qr (quartzipsammements, smoothed)		Depicting urban or disturbed areas. Permeability depends on development techniques and vegetative culture.	variable

Soil series are grouped by permeability² and the available water capacity.³ The classification of soil recharge potential shows the ability of a soil type to provide potential recharge water to the unconsolidated materials below 80 inches. Soil recharge potential was estimated by the authors. Soils were scale-modified from aerial photos in the publication, Soil Survey for Brevard County, Florida (U.S. Department of Agriculture, Soil Conservation Service, 1974). Soil series were taken from the Cooperative Soil Survey program in 1965 as listed in the 1974 report (Simmonson, 1962), and U.S. Department of Agriculture, 1960, supplements in 1967 and 1968, (references, sheet 3).

¹ U.S. Department of Agriculture, Soil Conservation Service, 1974.

² Permeability--The quality that enables the soil to transmit water or air, in inches per hour.

³ Available water capacity--The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil.

EXPLANATION

Mining operation (sand, limestone, or marl pits).

made land Filled land.

Water body (borrow pit, small ponds, and canals).

OVERLAY MAP OF THE COCOA QUADRANGLE, FLORIDA; SOIL TYPE AND PERMEABILITY AND SHALLOW AQUIFER RECHARGE POTENTIAL

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