

٥.٦.٤٣.٨ Soil Pollution

Definition and Introduction: Environment, Ecology, Ecosystem, Soil Science, Environmental pollution, soil-water and air pollution relationships, Soil pollution. Forming and Developing of soil: weathering and Erosion, Soil forming factors and processes, Horizons development. Soil Physical properties and pollution: Texture, Structure, Aeration, Temperature, Color, Density, Porosity, Void ratio, Permeability, Infiltration rate. Soil water and pollution: Soil moisture and water content, Classification, Energy, Movement, Determination. Soil Chemical properties and pollution: Mineral and organic colloids, Ion Exchange (CEC) soil solution, Salinity (EC) and Alkalinity (PH), Classification of Saline soil, Soil corrosivity. Biological properties and pollution: Organisms classification, O.M Decomposition (C: N Ratio), The Carbon, Nitrogen-cycles, Classification of Iraqi soils for Agricultural and Engineering purposes. Soil Deterioration in Iraq: desertification Kinds of pollution (Physical, Chemical and Biological), Sources of pollutions (Industrial, Agricultural, Municipals and Others), Soil pollution treatments: Soil treatment planning, Kind of treatment (In or Ex Situ – physical, Chemical and Biological), Irrigation, Drainage and Land Reclamation in Iraq.