

Surang Phornprasit 2011: Ground Water Potential Assessment using Geographic Information System in Mueang District Saraburi Province. Master of Science (Sustainable Land Use and Natural Resource Management), Major Field: Sustainable Land Use and Natural Resource Management, Interdisciplinary Graduate Program. Thesis Advisor: Mr. Damrong Sripam, D.Agr. 85 pages.

The purpose of this research was to study and collect information in the area factors which affected the potential ground water and assessment by using the multiple correlation equation analyzed. Secondly, study in economic and social conditions which was related to ground water administration of three villages' sub area in Muang district, Saraburi by using Arc GIS along with households' interview.

The research result is showed that land use, percent of slope, drainage density, rainfall, aquifer thickness and groundwater quality are the factors which related to ground water potential. While the equation is brought to create the potential ground water map by using Arc GIS program, are found that high potential area is 48.3 square kilometers (26.7%), moderate potential area is 103.9 square kilometers (57.5%) and low potential area is 28.5 square kilometers (15.8%). In difference level of groundwater potential areas have different dispersion of some economy and social characteristics in each household, which comprise with the principle occupation, paragon, household income, household expenditure, yield of growing rice, rice yields' price and household water consumption level. Mostly households have opinion that the suitable ways for managing ground water are; promote to using the other water sources along with ground water and operate water saving campaigns. Television and local radio are the best channel distribution in public relation which the household can approach on ground water resource information and management way by appropriately.

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Thesis Advisor's signature

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