

Control Treatment of Freshwater source nearby Saline water contamination by Geothermal Well(Poster 1) Şırnak Asphaltite Slime Use instead of Bentonite in Geothermal Well Drill (Poster 2) Yıldırım İsmail TOSUN



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Introduction

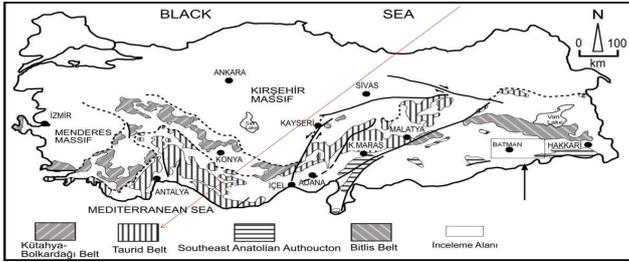
The parameters and data controlling hydrologic processes by Geographic Information Systems (GIS) have become an integral part of hydrologic studies. The main management is to bring together the use GIS to model s and hydrologic data. The general distribution of the inputs and parameters can control the surface sources or underground loss. GIS maps commonly describe topography, land use and cover, soils, rainfall, and meteorological variables may become model parameters or inputs in the simulation of hydrologic processes.

This investigation of water logging can be extremely useful in suitable water management strategies by reclaiming existing water logged areas. The problems of water logging and quality mostly exist in the irrigated areas like in South Eastern rocky plains of Batman, Turkey. The climate change and ground water changes generally results in over irrigation, seepage losses through channel and distributions, poor water management practices and inadequate control of drainage system. Analysis of high water table in water logged areas and drainage of irrigated areas have not been paid adequate attention in the planning and management of water resources, partly due to lack of requisite data and partly due to flood and rainfall in the country. In order to develop suitable water management strategies and controlling the extent of water logging in the area. GIS may facilitate the reconstruction of the ecological environment but also to accommodate the sustainable development of the water resources and waste water.

In this study, the hydrological characteristics of the Batman city were explained and the effect of these characteristics on the city was examined. In the investigation, hydrological features and the urbanization with new settlements needs modeling regarding available water source. The hydrological property of settlement areas with dense populated areas in the model was determined by Geographic Information Systems (GIS) techniques. The main purpose of this study is to investigate the effect of settlement on the basic hydrological structure by studying the characteristics of the ground topography, ground water elevation, slope and viewing. GIS techniques were used in the creation of the thematic maps and in the analysis of the parameters. Finally, the GIS study models created , the available water source change and a stream network model was provided sufficient source control at the Batman province. The presence of this stream network structure in the Batman province reveals the potential flood scale and flood risk. This study produced more systematic data with hydrological studies carried out with GIS support. GIS has made it possible to obtain more qualified data by enabling the use of multi-criteria decision making method (CCCF) in this research.

Metod

In the grape field areas by Geothermal fields, naturally occurring salt burn the soil and harm the irrigation water streams and groundwater sources contaminating fresh water wells in Aydın. There was contaminated sources originated from the area being covered by seawater or geothermal well saline seepages. If the well was 2 km far from the fresh water source of deep salt sources and the presence of sodium chloride was harming fresh cycle was possible contaminated that was found naturally in the groundwater in geothermal area. If that contamination was controlled by pH and filtration by heating crystallization in the pool, that reasearch was investing a treatment system might be the best option. The pressure filtration and pH control of fresh water , treatment was succesful for sodium and chloride and other salts in drinking water.



Batman Location View



Batman and River View

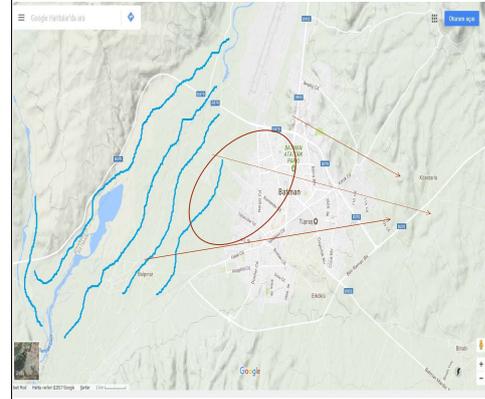
Batman Sittl and Limestone Drill Well And Stratigraphy

SİSTEM	SER	FORMASYON	UYE	LİTOLOJİ	AÇIKLAMALAR
PLİYÖSEN	KUŞ				Alüvyon
	ALT	ŞELMO			Kırmızı renkli kumtaşı-eyil ardalarması
MİYOSEN	ÜST	KARACADAĞ			Siyah renkli bazalt
	ALT	FIRAT			Beyaz renkli kireçtaşı
EOLYEN	ÜST	KAPIKAYA	Zökayıt Kireçtaşı Denge Evaporit		Pembe renkli kireçtaşı
	ALT	HOYA			Beyaz renkli jips
EÖSEEN	ÜST	GERCUŞ			Kırmızı renkli çamurlu taşı, kumtaşı ardalarması
	ALT	GERMAV			Gri renkli dolomit kireçtaşı
MAESTRİHTYEN	ÜST	GERMAV			Gri-yeşil renkli şeyl, marl, silttaşı ve kumtaşı ardalarması
	ALT	GERMAV			Koyu gri renkli şeyl, silttaşı ve kumtaşı ardalarması
GARZAN	ÜST				Beyaz renkli bol fosilli kireçtaşı
	ALT				Ölçeksiz

Effect of Barrier Stability for Well Drill



Batman Çay ın da Taşkın İhtimali , Su Taşma Tedbiri



Batman River and Water Contamination Area regarding ground water level

Conclusions

Urbanization and economic growth in the twentieth century evolved along with the management of natural resources. In this process, provision of drinking water supply and distribution service for urban areas also developed on the same plane. The effective role of the public was felt in meeting the water resources management and service. Infrastructure investments are centrally located, water resources are found, structured, stored, distributed and refined. Technically this process has been called "hydrological age" since engineers have determined this process. The whole process is based on "need". Large investments have been made in order to meet the need. The use of water resources (water withdrawal and ordinance) and evaluation for development and community needs have been studied. However, the amount and quality of water that the eco-system will need is not addressed. Everything is built on the theme of "develop-supply-use". Parameters considered in the planning of water resources were population estimate, per capita water demand, agricultural production, economic productivity level. Using these parameters, future water demand forecasts are used and these estimated values are used when designing the systems to meet the demand. In this approach, the demand for water has been determined independently of the specific needs of human needs, the amount of water a healthy ecosystem will need, or actual regional water availability. The next step in traditional planning is to identify projects that will reduce the gap between estimated water supply and demand. In every scale, the planning action (region, basin, city) is used for the regular and healthy spatial development uses (housing, commerce, industry, recreation, other social) in the metropolitan cities which are especially migrating in our country and in medium size settlements Such as equipment) as directed by location decisions; It also determines the water demand of the city at the same time with its population and density of buildings and its quality and quantity of usage. While city plans shape the socio-economic and physical structure of the city, with the proposed land use, employment, population and density decisions, the city's daily water demand is also shaped. Therefore, any kind of urban development outside the plan creates an unhealthy environment that affects the quality of life of the city, as well as poses a serious threat to the water resources (increased water consumption pressure and pollution) (Urban Planning Chamber Water Commission, 2006). Survey, planning (feasibility) and project work will be given efficiency. The quality of the water quality will be preserved, improved and monitored. Flood hazard maps will be prepared and an early warning system will be established.

References

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