

Essay on gis technology

[Business](#), [Management](#)



Offer a reasoned explanation of GIS technology and how it may be applied in the management of sanitary sewer systems.

GIS (Geographical Information System) Technology is described as a toolbox that makes it much easier for engineers to analyze spatial data (Clarke, 1999). It is of course, an electronic toolbox, computer software that gives engineers everything they need to work with spatial data, according to Clarke. The series on Geographic Information Systems goes on to state that a GIS functions as an automated tool for capturing, storing, retrieving, analyzing and displaying spatial data. It is a type of information system, which generates answers to users' questions or queries.

How GIS Technology Can Apply to Sanitary Sewer Systems

Using new technology can seriously improve the efficiency with which leaks in sewers are detected, according to Inouye, Gil (2004). Inouye writes that GIS works very well with other tools: GPS, mobile field computers, and cameras to make such management better. They are used to create 'digital maps' of sanitary sewer defects. According to Inouye, a combination of GIS, GPS and visual information helps maintenance crews to assess the level of damage, and what materials are required for the repair job. This technology can reduce unnecessary flow to wastewater treatment plants, thus saving money and also prioritization when assigning repair crews.

According to Poltak (2003), a Geographic Information System can link information in a database to the locations of manholes and sewer segments on a map. Linking this GIS to an asset management system then allows engineers to apply their system models and billing systems to the same.

According to Poltak, GIS allows users to create a map that has detailed

information about the physical structures. It can uniquely identify each manhole and cleanouts, making their management more efficient.

References

Clarke, K. C. Ed. (1999) Getting started with geographical information systems. 2nd ed. Upper Saddle River, New Jersey : Prentice Hall.

Inouye, G. (2004) Using GIS and GPS for sanitary sewer I/I detection.

Woolpert, Charlotte, North

Carolina : Water Management Department, Woolpert LLP.

Poltak, R. F. (2003). Optimizing operation, maintenance, and rehabilitation of sanitary sewer collection systems. Lowell, Massachussetts : New England Interstate Water Pollution Control Commission