EVALUATION OF SOLID WASTE TRANSPORTATION SYSTEM IN MALANG CITY

By: Achmad Widarto
NRP: 3307202708
Supervisor: Dr. Ir. Nieke Karanangingroem, M.Sc

ABSTRACT

The daily activities of population in Malang city produces waste and it is the largest source of solid waste from both households and economic sectors such as markets, restaurants and shops. Nowadays, in some temporary solid waste disposal area (TPS) in Malang city are often seen the number of garbage carts that can not drop the trash because the provided containers has full and has not been transported to the Landfill (TPA). This shows the problem on solid waste transportation system that is no longer relevant to the current conditions. Based on these problems is necessary to conduct a research to find out why waste transportation system was not sufficient anymore, what factors are affecting and how the optimal solid waste transportation system in accordance with the current conditions.

The number of solid waste transportation trip from temporary disposal area (TPS) to landfill (TPA) depends on the capacity factor of temporary disposal area (TPS), haul time from TPS to TPS and TPS to TPA, travel time from the Dispatch Station to TPS and TPA, vehicles conditions, road conditions, traffic conditions, weather conditions, off route, and transport routes. This research will conduct the measurement of those stages to obtain primary data and secondary data. The collected data will be analyzed and evaluated to get factors which caused the transportation system did not runs properly from the technical, finance and institutional aspect, and what efforts should be done to overcome it. It also conducted to select alternative transportation routes that can optimize solid waste transportation system.

The results of this study from technical aspect indicates that the existing transport vehicles are still sufficient to transport the solid waste every day. But at some temporary disposal area located in business centers where dense traffic and densely populated residential, the transportation system need to be rearranged so the trips lag time can be accelerated. It can lead to increased number of transport vehicle.

Key Words: Temporary Disposal Area Capacity, haul time, off route, transportation route, number of trip