ABSTRACT

Master's Thesis: 104 pp., 12 images, 35 tables, 66 sources, 1 supplement.

Topicality. In 2017, the Government of Ukraine has developed a National Waste Management Strategy by 2030. The strategy was created to improve the sphere of waste management in Ukraine to European standards, which is one of the conditions for our country's accession to the European Union. According to the Ministry of Regional Development, Construction and Housing, almost a quarter of the country's population are still not covered by the garbage collection service. The area of household waste management is currently very problematic. It is caused by the increase in the volume of household waste generation, in Ukraine, one person creates 250-300 kilograms per year. Therefore, it is worth paying attention to waste management issues until Ukraine literally sank.

Through globalization, large cities are expanding at an increasing rate, which in turn means a rapid increase in garbage collection points that need to be removed regularly. This increase in the number of garbage collection points leads to an increase in the transport problem, which garbage collection companies have to deal with every day. The task of bypassing all points in a circle and returning to the starting point belongs to the class of NP-complete, which means that finding the optimal solution by any means other than a complete search has not been found yet. Therefore, any optimization that enhances this process by at least one percent is relevant and useful. This paper discusses a way to optimize a similar transport task by time parameter, by evenly distributing the work during the planning stage.

Relationship of work with scientific programs, plans, themes. The work was carried out at the Department of Automated Systems for Information Processing and Management of the National Technical University of Ukraine "Kyiv Polytechnic Institute. Igor Sikorsky" within the framework of the theme "Effective methods for solving the problems of the theory of schedules", state registration number 0117U000919.

The purpose of the study is to increase the efficiency of the municipal transport enterprise by building optimal or close to optimal schedules.

To achieve the goal, you must accomplish the following **tasks**:

- analysis of existing transport planning methods and tools for transport companies;
- to formalize the task of transport planning in the conditions of uncertainty of indicators;

- development of software for a transportation schedule system based on the above methods;
- analyze the results.

The object of research is to optimize the task of compiling a transportation schedule by means of a uniform distribution of labor.

The subject of the research is the system of support of processes of activity of the enterprise of city transport on waste transportation.

The research methods used in the work are based on solving transportation theory and cluster analysis.

The scientific novelty of the obtained results is to develop a new method of evenly distributing the entire volume of work between the performers, without compromising the distance.

Publications. The materials of the work were published at the scientific and technical conference "Adaptive automatic control systems" №2 / 33, in the abstracts of the international scientific symposium "Intelligent solutions" and in the all-Ukrainian scientific and practical conference of young scientists and students "Information systems and control technologies" (ISTU- 2019).

LOGISTICS, TRAVELING SALESMAN PROBLEM, UNDEFINED INDICATORS, TRANSPORTATION THEORY, TRANSPORTATION SCHEDULE PLANNING ALGORITHMS, THE CLUSTERING PROBLEM