

Thesis Title A Study of the Alternatives Determining the Wastewater
Treatment Fees of Phitsanulok Municipality.

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Abstract

The main purpose of this study was to study the suitability of the wastewater treatment fees of the Phitsanulok Municipality in terms of the customers' willingness to pay, factors that influence their willingness, and directions for determining a suitable rate of water treatment fees of the municipality.

The data, collected through the method of survey research, was composed of a five-section questionnaire: the samples' general background data, background knowledge about water pollution and wastewater treatment system, attitudes toward environmental problems, willingness to pay for water treatment service, and preferences regarding the wastewater treatment fees. The questionnaires were tested for reliability and validity. The samples' under study included municipal residents,

business enterprises, and the responsible municipal officials and were divided into 4 groups : 120 households of general residential communities, 120 households in housing projects, 120 business enterprises, and 40 responsible municipal officials, totaling 400 random samples'. The data were analysed through descriptive and inferential statistics, e.g. : frequency value, percentage value, average mean, the analysis of Variance, the discriminant analysis, the logistic regression analysis, and the Kruskal-Wallis one-way analysis of variance by Rank. The results were significant at the 0.05 level.

The findings were as follows :

1. The wastewater treatment fees were calculated according to the average incremental cost

(baht/cubic meters)

Service rate	Industrial Factories	Service Enterprises	Market	Households
1. Total Project Cost	9.55	7.70	5.91	4.13
2. Collection, Treatment and Maintenance Cost	5.79	4.66	3.98	2.50
3. Operation and Maintenance Costs	2.06	1.66	1.27	0.89

2. Factors affecting the classification of consumers in their willingness to pay for the service were household location, household utilization (residential or semi-commercial), existence of wastewater treatment system, knowledge of water pollution and the wastewater treatment system, attitudes towards sewage

problems, cooperation on solutions to wastewater treatment, and access to information on the wastewater treatment system.

3. Factors influencing customers' willingness to pay for wastewater treatment fees were their knowledge of water pollution and the wastewater treatment system, cooperation on solutions to sewage problem and attitudes toward sewage problem.
4. Alternatives to the determination of wastewater treatment fees should cover construction, implementation, and maintenance costs.

Criteria for determining wastewater treatment fees for households :

- The calculation of sewage quantity should be carried out in proportion to the quantity of running water.
- The wastewater treatment fees should be collected at a fixed rate (sewage quantity multiplied by unit rate)
- The wastewater treatment service fees should be collected together with the monthly water supply fee.

Criteria for determining wastewater treatment fees for business operations:

- There should be an ordinance specifying the calculation of the wastewater treatment service fees for each operation.
- The wastewater treatment fees should be collected at a fixed rate (sewage quantity multiplied by unit rate)
- There should be an ordinance specifying the collection of the wastewater treatment fees for each operation.