



ILLEGAL DUMPING ECONOMIC ASSESSMENT (IDEA) MODEL

OVERVIEW

Illegal dumping is a major problem that raises significant concerns with regard to safety, property values, and quality of life in our communities. In addition, it is a major economic burden on local government which is typically responsible for cleaning up dump sites. EPA Region 5 established the Illegal Dumping Prevention Project to exchange information and establish partnerships to develop and implement strategies to address the problem. An Illegal Dumping Prevention Guidebook was developed to summarize lessons learned from collaborative projects across the U.S. Another product of this effort is the Illegal Dumping Economic Assessment (IDEA) model. The IDEA model was developed with extensive input from local government and community groups from across the United States. A beta test of the model was recently conducted in the City of Chicago. The IDEA model is a simple, useful tool to help users understand the total costs associated with illegal dumping and the economic impact on their community.

ABOUT THE MODEL

The IDEA model is an easy-to-use tool for assessing a variety of costs associated with illegal dumping activities, primarily in urban areas. Intended users include (1) state, tribal, and local government authorities and (2) community groups and civic organizations.

Specifically, the model can be used to:

- Estimate the costs of cleanup activities
- Assess indirect costs
- Conduct cost analyses

The formulas of the model, its option buttons, and macros are embedded in a Microsoft Excel spreadsheet. This format allows the model to be a flexible, comprehensive cost analysis tool that is available in a popular software platform. A users manual accompanies the IDEA model, which is available at no charge.

BENEFITS

The model can be used to (1) develop cleanup cost estimates, (2) accrue actual costs and (3) conduct analyses on:

- An individual site
- A specific group of sites
- All sites in a given community

Users can estimate total site cleanup costs and assess indirect costs such as those associated with site surveillance activities, property liabilities and prevention programs.



Users can rely on the model's default values, which were drawn from a variety of cost estimating products and from environmental and economic reports, for many cost parameters. However, while the default mode provides for quick estimates, the more data gathered and input manually by the user, the more accurate the output. Users are encouraged to (1) accurately identify and measure waste materials and (2) gather specific information on local labor, equipment, and material costs.

A summary of the costs can be printed out in a financial statement that details the illegal dump site characteristics and the labor, equipment and material costs for several specific cost categories. This statement can be used to:

- Inform decision-makers
- Notify responsible parties or recover costs
- Analyze, track or compare costs
- Review cost proposals

PARAMETERS INCLUDED

The model is based on the following parameters:

- Dump site features
- Waste type and volume
- Site cleanup
- Waste transport
- Waste disposal
- Site restoration and security
- Site surveillance
- Property values
- Program administrative costs
- Offsetting costs
- Adjustments to default cost values

PARAMETERS NOT INCLUDED

Certain cost parameters associated with illegal dumping activities were not included because of limited data availability or burden and complexity of data collection. Although these parameters are not specifically accounted for, the model provides space and flexibility for users to manually enter additional cost items and thereby assess these costs.

The following parameters are not currently included in the model:

- Lost hauling and disposal revenues of legitimate businesses
- Site age
- Migration of waste
- Hazardous waste

FOR MORE INFORMATION

If you have any questions, are interested in using the IDEA Model, or would like additional information, please contact:

Paul Ruesch
U.S. Environmental Protection Agency Region 5
77 West Jackson Boulevard (DW-8J)
Chicago, Illinois 60604
Telephone: (312) 886-7598
E-mail: ruesch.paul@epa.gov

The Illegal Dumping Prevention Guidebook is available at no charge by calling 312/886-2395 or by visiting <http://www.epa.gov/region5/dmpguide.htm> on the Internet.

The IDEA model was developed by Tetra Tech EM Inc. in coordination with Enviro Impact Solutions under a contract with U.S. EPA Region 5.