

Litter Index Training Manual

Broward County Litter Index

Why is Litter Indexing Important?

Measurability and accountability is what distinguishes Keep America Beautiful, Inc (KAB) and the nationwide network of affiliates. KAB are national experts in litter prevention because they have proven effective methods for reducing litter in communities and have developed an approach to measuring litter. Based on the research of KAB Litter Measurement Technical Committee and field-testing and review by selected KAB affiliates and state leaders, the Litter Index has been designed to make litter-prevention work easier and reported results more credible. The results will help quickly and reliably assess the litter situation in the community with the aim of achieving long-term, sustainable results.

Visually assessing the community is an essential part of the education planning process. Involving community representatives from neighborhoods, businesses and government in the process is important to achieve partnership solutions and to promote individual responsibility, ownership and pride in results. The data gathered by conducting the Litter Index will help determine the types of litter prevention and community improvement programs to implement locally. Since no two communities are exactly alike, no single improvement plan will address all the needs of every KAB community. Over time, comparisons of the Litter Index data can be used to evaluate results and identify what works locally to change attitudes and behaviors regarding litter and related community improvement issues.

The Litter Index is applied annually, at approximately the same time each year, and results are reported to the KAB national office. Broward County's Litter Index data helps KAB identify national trends regarding litter and related community issues. The Broward County Adopt-A-Street Program conducts the Broward County Litter Index for the KAB affiliate Broward Beautiful. The Adopt-A-Street Program is run out of Waste and Recycling Services and trains county Student Recycling Aides as surveyors.

The Litter Index requires that a map of your community is looked at, divided into comparable, manageable areas, and then further divided into the sub-areas that will actually be scored. In the scoring process, community members will be brought together, trained in the Litter Index scoring system and then driven to the sub-areas selected. When scoring is completed, the scores of the sub-areas in the selected area are averaged to arrive at an area score, and then average the areas scores to achieve a community score.

The basic tools needed to apply the Litter Index will involve the following four areas of activity:

Preparation of Scoring Map

A local map will first be divided into about 5-15 areas which, taken together, encompass Broward County's entire community. These areas can consist of political subdivisions such as wards, councils, or county commissioner districts; sanitation districts; school districts; neighborhoods; or other existing boundaries. Note, each area will be further divided into about 10-20 sub-areas, which are the units that will actually be scored. The sub-areas selected should be a fair representation of the land use within the area.

Training of Scorers

Teams of 4 individuals will be recruited consisting of one driver and three scorers. These scorers will be trained in the use of four-point scale, the scoring process, and the role the Litter Index results can play in the work of Broward County.

Scoring Process

This Litter Index uses a four-point scoring system to estimate the presence of litter in the area to be scored. The trained scorers will drive through the various sub-area and give each a score, rating the amount of litter observed as follows:

- 1 represents "No Litter"
- 2 represents "Slightly Littered"
- 3 represents "Littered"

- 4 represents “Extremely Littered”

These scores are essential to the Litter Index.

Data Analysis and Reporting

The data collected on the scoring sheets will then be averaged in order to obtain area scores and a Broward County score. This information will be used locally to direct and evaluate litter abatement programs and measure progress. The data will also be reported to Broward Beautiful and the KAB nation office, for use in compiling overall litter statistics.

Preparation of Scoring Map

Three of the key terms used in these instructional materials are “communities,” “areas,” and “sub-areas.” These terms are defined as follows:

- Communities are the total extent of a Broward County County’s jurisdiction.
- The Community is then divided into about 5-15 sub-areas, in order to break down the work into manageable units.
- Areas are then divided into about 10-20 sub-areas, which are the units to be scored and select sub-areas for actual scoring.

The first step in conducting the Litter Index process is the preparation of a scoring map. This map will be used to define the total community, divide the community into areas and select sub-areas for actual scoring.

Areas

A map has been created through GIS that depicts the entire area of Broward County County, with clearly marked roadways. The map is broken into 9 County Commission Districts.

The following general objectives were followed in the selection of areas: (1) break down the work into manageable units; (2) identify comparable areas based on such parameters as population, square miles, etc.; and (3) facilitate year to year, or “before and after” comparisons throughout the community. It is important that the areas selected support

the educational focus of Broward County. These areas will generally remain the same from year to year.

Sub-areas

Each of the 9 Broward County Commission Districts was divided into 10 sub-areas, which are the units that will actually be scored with the four-point scale. These sub-areas are 10 one-mile stretches of roadway and should provide a fair representation of land use within the area. In addition to the 10 sub-areas 2 middle schools in each district will be scored on the four point scale.

These sub-areas will be marked on the scoring map by tracing the roadways to be driven in the sub-area. The following were the guidelines used in the sub-area selection process:

- The sub-areas can total as high as 100% of the area, but should not be less than 20% of the area. Either street mileage or square footage can be used to estimate the percent of the area covered by the sub-area. The larger the percentage of the area covered by sub-areas, the more accurate the overall scores will be.
- The sub-areas selected are a fair representation of the land uses within the area.
- Scorers should be able to score all the sub-areas within an area in about 1 to 2 hours.
- Sub-areas could include: short stretches of roadway; parks; schools; small commercial districts; or several blocks of residential neighborhoods.

Giving scores to sub-areas throughout Broward County serves several functions. First, it helps direct education, beautification, and litter prevention programs, such as the Adopt-A-Street Program. Second, it allows for the compilation and averaging of sub-area scores into areas, providing comparisons between major parts of Broward County. This process of combining sub-area scores also leads to overall scores for Broward County. The area and community scores can be used to track overall progress in litter prevention on a year-to-year basis.

Training of Scorers

Broward County Waste and Recycling Services has 12 Certified Scorers that will complete the one hour training class. About 6 individual scorers, 3 drivers, and a scoring leader will be used to apply the Litter Index. Classroom training is used to discuss the four-point scale, the scoring map, the scoring sheets, and the instructions for actual field scoring.

Written descriptions will be used to describe the four-point scale, along with sample photographs that illustrate each score, and a video that further illustrates these four possible scores under actual scoring conditions. The exhibits used in the Litter Index kit will be used in the classroom training. The idea is to develop a consensus understanding among the scorers of situations representing each of the four points on the scoring scale.

Scoring Process

After completion of the scorer training, the team will move into the field to do actual scoring of the various sub-areas. It is important that scores all hear the same instructions and that the scorers all have a similar field of vision. The following instructions apply during scoring:

- 1) The scoring leader will call “start” along with the corresponding number for each sub-area to be scored. When the entire sub-area has been viewed, the leader will call “stop.”
- 2) When stop is called, each scorer will write down a 1, 2, 3, or 4 opposite the appropriate sub-area number on the scoring sheet. If a scorer is unsure, he/she might use a 0.5, such as 2.5 when unable to decide between 2 and 3. The intent, however, should be to normally use 1, 2, 3, or 4 when scoring.
- 3) Unless instructed otherwise, scorers should look left and right in alleyways, parking lots, businesses, residences, etc. to assess the overall sub-area. Both public and private property should be included.

Consider the following:

- How visible is the litter?
 - How continuous or frequent is the litter?
 - How difficult would it be to clean up the sub-area in question?
- 4) During the scoring process, there should be no discussion among scorers.
 - 5) Scorers may use the “notable conditions” column on the scoring sheet to indicate other circumstances, such as graffiti, illegal dumpsites, broken windows, or unkempt vegetation. This column can be used for listing conditions that might guide a work plan in one of the other areas of focus: beautification, community improvement, and minimization of the impact of waste on communities.
 - 6) When all sub-area scoring is complete, the scoring leader will check to be sure all the scoring sheets are filled in properly and will collect them.

Data Analysis and Reporting

Data Reduction

The data recorded on the scoring sheets will be used to develop the scores for each area. This information includes the average score for each scorer, for each sub-area, and for the entire area. This can be achieved manually or by using a spreadsheet application. Please contact Keep America Beautiful Affiliate Services (203-323-8987) at the national office for guidance if the variability among scorers appears to be unusually high.

Data Use

The primary use of the information obtained using the Litter Index is to assist Broward County in directing its education, beautification, and litter prevention programs to those sub-areas and areas that require increased emphasis. This information can also be used to assess overall year-to-year progress. The collection of this information annually will assist in the understanding and prevention of litter locally, statewide and nationally.

Reporting to KAB

A brief Litter Index report will be submitted to Broward Beautiful including: KAB affiliate name, state, population, and size; date of Litter Index scoring; total scoring time; number of scores; area selection basis; area scores; and overall Broward County scores. The report will be included with the Broward Beautiful annual report and submitted to the national KAB office.