

Island County Roadside Litter Assessment, 2005

EXECUTIVE SUMMARY

We conducted a baseline assessment of roadside litter in Island County in June-October 2005. The primary goal was to determine major sources of litter to assist the Environmental Health Action Team in targeting and evaluating litter reduction efforts. Follow-up surveys at the same sites are planned for subsequent years.

Litter was collected and tallied at 22 survey sites, 5 on north Whidbey, 6 central Whidbey, 7 south Whidbey, and 4 on Camano Island. Of these, 13 sites were within one mile of a fast food restaurant or convenience store, 5 were in sight of a school, 6 were located along a state highway, 2 on major arterials, 5 on less busy arterial roads, and 4 along minor rural roads. Mowing, which mulches litter items into many pieces, affected 19 sites.

Each survey site was approximately 100 meters long with the length adjusted to visible landmarks to facilitate repeat surveys of the same location. Site width was determined by landscape features that trapped litter. Overall amount of litter at each site was quantified by counting each item. All items counted were collected. Each item was counted only once, i.e., under only one category. Objects greater than 1-inch in diameter were defined as "large" litter in this study and were classified into one of 80 categories. A "Small Item Survey" was conducted on approximately 10% of each survey site. This area was scanned minutely and all visible litter was collected, with items less than 1-inch in diameter defined as "small" and classified into one of 14 separate categories. While collecting larger litter from the rest of each site, workers also collected "small" litter optionally; these items were recorded separately.

In all, 6,494 pieces of litter were collected and catalogued. Of these, 3,695 (57%) were in the large litter categories. Fast food items (snacks, takeout, and fast food; 1169 items) made up 32%, or one third, of large litter. Another 25% of large litter objects were miscellaneous items of paper, cardboard, plastic, and glass whose original purpose could not be identified. Product packaging accounted for 13%, beverage containers for 9%, and debris items (debris from vehicles, road and building construction, and a wide assortment of items from home or garden) for 9% of large litter. The remaining 12% included printed paper, retail bags and boxes, and non-beverage containers. Overall, the most abundant single litter category was packaging for snack food (828 items: bags and wrappers for chips, cookies, candy bars, gum, cereal bars, toaster pastries, muffins, etc.). This trend was consistent across sites; among large litter from 21 of the 22 surveys, snack packaging ranked either first or second in quantity. Other items numbering first or second at a site were beer cans and bottles (3 sites), paper food wrap (1 site), condiment packages (1 site), paper towels/napkins/tissue (1 site), printed paper (4 sites), cigarette packages (1 site), miscellaneous plastic film (6 sites), and home or garden items (2 sites).

Certain "large litter" categories were found commonly across the 22 sites surveyed. Home/garden items were recorded at all sites, snack packaging at 21 sites, and

cigarette/cigar packages at 20 sites. Other items common to a majority of sites were beer and soda cans, all categories of paper, miscellaneous plastic film, plastic packaging, plastic retail bags, plastic sandwich bags, plastic water and soda bottles, plastic cup lids and plastic container lids, and paper cups.

In the designated "Small Item" surveys, 1,447 objects (22% of all litter) were collected. Most numerous overall were cigarettes (631). More than a third of these were from a single site, but cigarettes were still the most abundant small litter item in 10 of the "Small Item" surveys. Other small litter items found in the highest quantity were candy wrappers (223), paper pieces (127), and plastic film (101). An additional 1,352 "small" objects (21% of all litter items) were collected on the 90% of each site outside the "Small Item" survey area. Among these, cigarette butts (874) and polystyrene peanuts (297) were found in highest quantity. Looking at all 2,799 small items to see what litter types were found commonly across different areas, cigarette butts (1,505) were collected at 21 sites, polystyrene peanuts (358) on 18 sites, straws (70) on 16 surveys and bottle caps (62) at 17 sites.

Survey locations with the highest quantity of litter were Highway 20 north of Oak Harbor (south of the intersection with Regatta Drive) and the four sites on north, central and south Whidbey next to secondary schools. On the basis of these 22 surveys, packaging from snacks, fast food and takeout food appears to be the major source of larger roadside litter in Island County. It is abundant and widespread. Cigarette filters are the most common and most numerous small litter item overall.

FOR FINAL REPORT

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ADD TO REPORT

In all, 6,494 pieces of litter were collected and catalogued. Of these, 3,695 (57%) were "large" litter items (>1" diameter), 1,447 (22%) were items <1" diameter collected in the

designated "Small Item" survey areas, and 1,352 (21%) were small items picked up in the other 90% of some survey sites. The difference between the two categories of small items is that in all 22 survey sites, the "Small Item Survey" area was searched attentively for every visible piece of litter however small, whereas small items were collected with varying rigor in the remaining area of each survey site depending on the time, interest and stamina of the volunteer picking up that site. At least some cigarette butts, though not necessarily all present, were collected outside the "Small Item" area on 15 of the 22 sites. Other small objects commonly collected on the rest of the site by the litter pickers were polystyrene peanuts, straws and bottle caps. Because collecting this latter category of small items was considered optional, these items have been omitted from some of the analysis.

Although cigarettes were the most numerous item recorded, it should be noted that over 1/3 of all cigarettes were collected at one site (NW3) and about 1/5 at another site (CW1), so these sites weight the figures disproportionately.