

**Litter Collected in Island County
by Adopt-A-Road and Adopt-A-Highway Volunteers
in 2005**

Island County W.O. #1212
Task 2
Final Report

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I. Introduction

Volunteer organizations are recruited into the Adopt-A-Road and Adopt-A-Highway programs to pick up roadside litter in Island County. Adopt-A-Highway (AAH), administered by Washington Department of Transportation, collects litter along SR 525 and SR 20 on Whidbey Island and along SR 532 east of Terry's Corner on Camano Island. Adopt-A-Road (AAR), administered by Island County Public Works Department, recruits groups to clean up adopted sections of many county roads.

Using weight records obtained from Island County Solid Waste Department, this report analyzes the record of litter deliveries to Island County Solid Waste by AAR and AAH during the year 2005 and compares it with data from 2001-2004.

II. Adopt-A-Road

Roadside litter collected in Island County by AAR groups in 2005 totaled 3.47 tons. This compares with a range of 3.43 tons in 2001 to 7.46 tons in 2002 (Table 1).

Table 1. Weight of Adopt-A-Road litter recorded each year, including the average, standard deviation and range among all scale records for that year.

Year	Total Weight (tons)	Total Weight (pounds)	Average Weight	Standard Deviation	Range	Number of Records
2001	3.43	6,860	0.06	0.06	0.01-0.30	60
2002	7.46	14,920	0.10	0.15	0.01-1.17	77
2003	3.84	7,680	0.08	0.10	0.01-0.49	46
2004	4.05	8,100	0.07	0.18	0.01-1.31	55
2005	3.47	6,940	0.06	0.04	0.01-0.17	60

AAR groups drop off their bagged litter at no charge at four disposal sites: Coupeville, Bayview, Oak Harbor and Camano. In 2005 the amount of litter deposited at Coupeville was much higher than Camano, a different pattern from 2002-2004 (Tables 2a [tons] and 2b [pounds]; Figure 1).

Table 2a. Weight in tons of Adopt-A-Road litter delivered to the four collection sites each year.

Annual Total (Tons)	Coupeville	Bayview	Oak Hbr	Camano	TOTAL
2001	1.59	0.77	0.00	1.07	3.43
2002	2.57	0.20	1.72	2.97	7.46
2003	1.69	0.11	0.17	1.87	3.84
2004	1.70	0.14	0.25	1.96	4.05
2005	<u>1.69</u>	<u>0.10</u>	<u>0.69</u>	<u>0.99</u>	<u>3.47</u>
	9.24	1.32	2.83	8.86	22.25

Table 2b. Weight in pounds of Adopt-A-Road litter dropped at the four collection sites each year.

Annual Total (Pounds)	Coupeville	Bayview	Oak Hbr	Camano	TOTAL
2001	3,180	1,540	0	2,140	6,860
2002	5,140	400	3,440	5,940	14,920
2003	3,380	220	340	3,740	7,680
2004	3,400	280	500	3,920	8,100
2005	<u>3,380</u>	<u>200</u>	<u>1,380</u>	<u>1,980</u>	<u>6,940</u>
	18,480	2,640	5,660	17,720	44,500

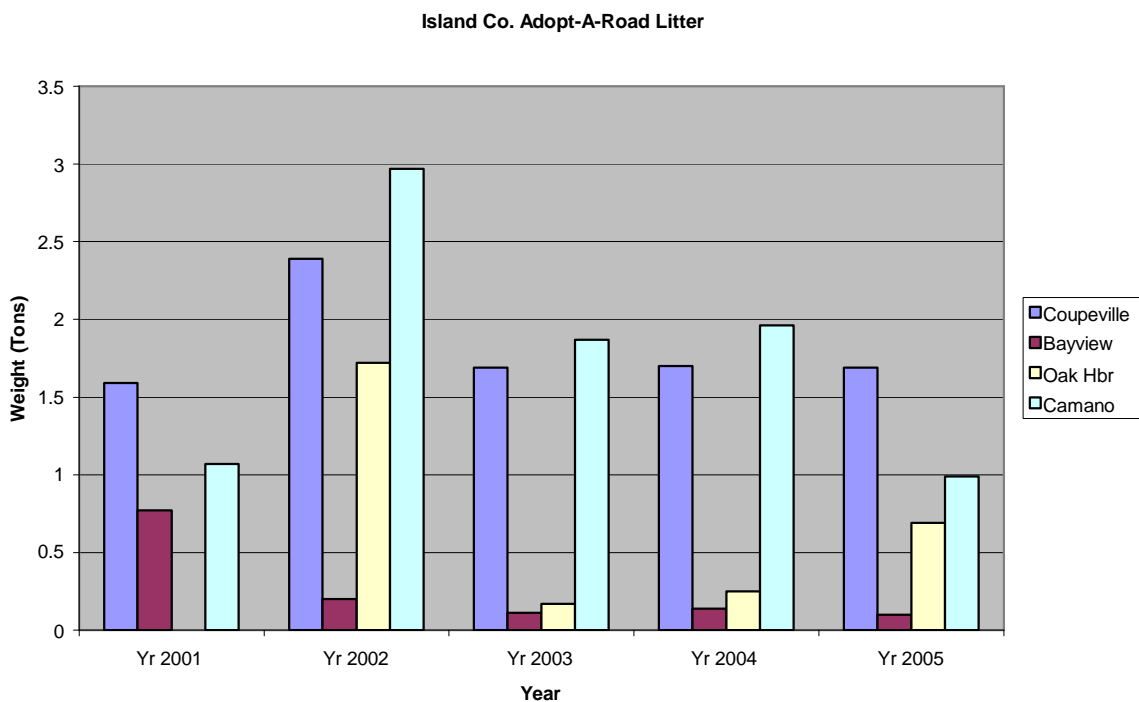


Figure 1. Litter collected by Adopt-A-Road volunteers in Island County in 2001-2005

At the Coupeville and Camano disposal sites, vehicles are weighed on entry and again on exit, the difference being the weight of the litter. The scale records weights in 20-pound increments; 0.1 tons is 20 pounds (1 ton being 2,000 pounds). The Bayview and Oak Harbor disposal sites do not have scales, so the litter is put in cans and the unit of measure is volume, with weight calculated based on the number of cans at an estimated 50 pounds per can.

The quantity of litter brought in by AAR groups was much higher in 2002 than in any other year. Possibly there was much more roadside litter in 2002, but the difference might also be due to greater-than-usual effort on the part of volunteers that year. For example, there are more than twice as many records from Camano in 2002 as in any other year, the bulk of them on a single day in June (Table 3).

Adopt-A-Road and Adopt-A-Highway in 2005

Table 3. Number of records for each site per year.

Number of records	Coupeville	Bayview	Oak Hbr	Camano	TOTALS
2001	38	6	0	16	60
2002	45	2	3	27	77 ¹
2003	30	3	2	12	47
2004	41	4	1	9	55
2005	<u>39</u>	<u>2</u>	<u>7</u>	<u>12</u>	<u>60</u>
	193	17	13	76	299

¹ (22 of these were on 1 June 2002 on Camano)

The most active months for litter cleanups by AAR groups are October, May, April, and March (Table 4).

Table 4. Number of AAR drop-off dates at each location in each month of the year.

(Here multiple records on a single date are counted as one collection event unless specifically noted on the Solid Waste data sheet as two distinct groups.)

	2001				2002				2003				2004				2005				TOTALS
	Coupeville	Bayview	Oak Hbr	Camano	Coupeville	Bayview	Oak Hbr	Camano	Coupeville	Bayview	Oak Hbr	Camano	Coupeville	Bayview	Oak Hbr	Camano	Coupeville	Bayview	Oak Hbr	Camano	
Jan	0	0		2	1	0		0	0	0		0	0	0	1	1				1	6
Feb	0	0		4	3	0		1	1	0		1	1	0	3	3				1	18
Mar	2	2		1	1	1		0	4	0		0	7	1	0	2			1		22
Apr	3	1		1	5	0	2	0	4	0		2	4	0	0	3	1		1		27
May	5	1		0	7	0		1	3	0		1	2	0	1	11					32
Jun	0	0		2	2	0		1	1	0	1	2	3	2	1	2			2		19
Jul	2	1		1	1	0		0	2	1		0	1	0	1	1			1	1	13
Aug	6	1		1	1	1		1	2	0		0	1	0	0	1			2		17
Sep	0	0		1	2	0		0	3	1		2	1	0	1	3	1	1	1		17
Oct	7	0		1	7	0	1	1	4	0		2	7	0	1	1	8			1	41
Nov	1	0		0	1	0		1	3	0	1	1	2	1	0	3				1	15
Dec	0	0		2	1	0		0	0	0		1	1	0	0	1			2	1	9
Total	26	6	0	16	32	2	3	6	27	2	2	12	30	4	1	9	39	2	7	10	236

From the annual records on Adopt-A-Road efforts in Island County, it cannot be determined whether changes in litter tonnage collected reflect changes in quantity of roadside litter or variations in volunteer litter-collection efforts. As noted in the report submitted last year, this data can only be used to form a general idea of the quantity of litter collected each year in Island County, not to make fine comparisons. See S. Schmidt, 21 July 2005, *Litter Collected in Island County by Adopt-A-Road and Adopt-A-Highway, 2001-2004*, for additional discussion of factors complicating interpretation of this data.

III. Adopt-A-Highway

As volunteers for the county, Adopt-A-Road groups bring the litter they collect to the transfer station where it is measured and recorded, but they pay no fee. In contrast, Adopt-A-Highway groups leave their litter bagged on the roadside and Washington Department of Transportation (WDOT) personnel collect the bags and bring them to the Coupeville transfer station. WDOT is charged a disposal fee. All WDOT records are from the scale house in Coupeville so apply only to Whidbey Island.

WDOT has a single account with the County to which is charged *all* trash that WDOT vehicles bring across the scale. This includes not only AAH litter but also illegal dump cleanups, dead deer and other animals, and large items cleared from the roadways. Thus in the available WDOT numbers, *the AAH contribution cannot be distinguished from other trash collected by WDOT along SR 20 and SR 525.*

Table 5. Weight of WDOT litter recorded each year, including the average, standard deviation and range among all records for that year.

Year	Total Weight (tons)	Total Weight (pounds)	Average Weight	Standard Deviation	Range	Number of Records
2001	7.13	14,260	0.12	0.07	0.01-0.41	60
2002	10.59	21,180	0.13	0.13	0.01-0.90	84
2003	18.13	36,260	0.12	0.22	0.01-2.33	157
2004	13.12	26,240	0.10	0.07	0.01-0.38	130
2005	12.19	24,380	0.09	0.07	0.01-0.50	129

IV. Summary

As seen last year, those years with higher numbers of scale records tend to have higher overall tonnage.

For Adopt-A-Road, a significantly higher quantity of litter was collected in 2002, whereas for WDOT, 2003 had by far the highest weight of trash. If amount of trash collected by AAR and AAH was a reliable indicator of overall quantity of roadside littering in the county, one would expect the annual patterns of the two programs to be similar.

Total weight per year may be a poor measure of overall trends in roadside littering as it may be tied more to the amount of clean-up effort (i.e., number of delivery records) than to changing quantity of litter. Note that when total weight is averaged by number of scale records (average weight, Tables 1 and 5), there appears to be little difference among years, in spite of the high variability among individual records (range, Tables 1 and 5).

Adopt-A-Road volunteers collected 3.5 tons of litter along Island County roads in 2005. WDOT recorded between 12.2 tons of trash collected from state highways on Whidbey Island in 2005, some significant proportion of which was from the volunteer work of Adopt-A-Highway groups. Perhaps the most useful conclusion to draw from Island County's Solid Waste scale records is that more than 15 tons of litter was picked up along Island County roads in 2005.