



## 2010 Washington State Population Survey Technical Report 1: Sample Disposition and Response Rates

**T**HIS REPORT is one of several technical appendices prepared by the Office of Financial Management to supplement the 2010 Washington State Population Survey (SPS). The survey was funded by the Legislature to provide social, demographic, and economic information about Washington residents biennially.

Responses to the survey were obtained from telephone interviews with 7,715 households that represent the state population as a whole. The survey was designed by OFM and conducted by the Gilmore Research Group in the Spring 2010.

### Sample Disposition and Response Rates

A stratified sample by region was selected from all households in state of Washington with an activated telephone line, either listed or unlisted. A target of 641 households was planned for each of the ten regions with three exceptions. In both Pierce and Snohomish counties, 681 households were targeted in each county. In King County, 1,800 households were targeted for interviews. King, Pierce and Snohomish counties were sampled at higher rates due to their larger population size and to insure sufficient information on racial minority groups for statistical analyses. Households were selected in each of the regions using random digit dialing (RDD) technique.

**Table 1**  
**Complete Sample Disposition for the General Population Sample**

<b>Sample Disposition</b>	<b>General Population Sample</b>
CM: Completed Interview	7,715
PC: Partial complete	9
PB: Partial complete	1,101
CP: Pretest completion (Included in CM)	103
R2: Soft refusal	92
R3: Hostile refusal	4,713
R5: Refusal on conversion attempt	1,681
RN: Refusal for respondent not available	0
R6: Put on "Never Call" list	1,113
R70: Letter refusal	105
R63: Refusal of # of HH members	46
CB: Specific callback	34
GB: General callback	127
BZ: Busy signal	664
NA: No answer	4,134
AM: Answering machine	5,671
LM: Answering machine, left message	0
DF: Deaf respondent	484
HC: Handicapped respondent	219
LG: Language problem	432
DD: Respondent deceased	32
RG: Respondent gone	120
IE: Ineligible, respondent too young	6
BG: Business or government	2,281
DS: Disconnected	5,765
ED: Electronic device	3,665
BC: Blocked call	26
WR: Wrong number	524
DP: Duplicate number	0
NQ: Not a WA state resident	81
OT: Other misc.	137
SP: Spanish sample (callable)	3
SA: Spanish no answer	37
SB: Spanish answering machine	59
SG: Spanish general callback	21
SZ: Spanish busy signal	12
PN: Purged nonworking numbers	70,247
NQ: Over quota	0
<b>Total Sample</b>	<b>111,362</b>

Calculating response rates for a survey requires first a complete account of the disposition of all sample cases regarding the outcome of the interview attempt. Table 1 presents the complete sample. The first column is a description of the dispositions. The second column contains the disposition figures for the sample.

### Sample Disposition Summary

Table 2 contains a summary of the sample disposition details. It shows a total of 90,837 cases were released for the sample. Of the 11,362 cases released, 7,715 resulted in completion (CM), 8,980 in refusal (RF1 and RF2), 12,197 in no contact (NA1, NA2, and SNA), and 82,470 in ineligible (IEH and IEO).

**TABLE 2**  
**Sample Disposition Summary**

Sample disposition Summary	General Population Sample
CM = (CM,CP)	7,715
RF1 = (PC,PB)	1,110
RF2 = (R1,R2,R3,R5,RN,RP,R70,R63,R6 RG)	7,870
NA1 = (CB,GB,BZ,AM,LM,DF,HC,LG, TR)	4,422
NA2 = (NA)	7,666
SNA = (SA,SB,SG,SM,SZ)	109
IEH = (DD,IE)	44
IEO = (BG,DS,ED,BC,OT,UP,PN, WR, DD NO, OO)	82,426
<b>Total</b>	<b>111,362</b>

*Note 1: Disposition codes in parentheses refer to those in Table 1.*

### Response Rates

Table 3 contains four different response rates. The reason for inclusion of different response rates is that different organizations may have varying needs for presenting information and some response rates are more appropriate than others. A total of four response rates are calculated. These rates are based on definitions of response rates set by the CASRO.

The first two rows of Table 3 are two adjustment factors. The first adjustment factor (ADJ1) represents the percent of contacted households that are ineligible for the survey because of death or age. The adjustment is 0.50 percent for the sample. The second adjustment factor (ADJ2) represents the percent of telephone numbers that are excluded from the sample because they are not residential households.

**Table 3**  
**Response Rate Calculations**

Response Rate Calculations	General Population Sample
ADJ1 = %INELIGIBLE= (IEH+IEE)/(CM +RF1+IEH+IEE)	.50%
ADJ2 = %OUT OF SAMPLE = IEO/TOTAL	74.02%
RR1 = CM/(CM+RF1+RF2)	46.21%
RR2 = CM/(CM+RF1+(1-ADJ1)*RF2)	46.32%
RR3 = CM/(CM+RF1+RF2+NA1+SNA+NA2)	26.70%
RR4 = CM/((CM+RF1+ (1-ADJ1)*(RF2+NA1+SNA)+ (1-ADJ2)*NA2))	33.32%

*Note 1: Disposition codes on right-hand side of the equation refer to those in Table 2.*

The four response rates displayed in the next four rows differ only in what is included in the denominator. The first rate (RR1) is a crude rate. It is the ratio of completes over the sum of completes (CM) and refusals (RF1 and RF2). RF1 in the denominator refers to refusals after the identifying information is collected. RF2 refers to refusals before the identifying information is collected. This rate can be considered as a crude cooperation rate, i.e. the proportion of all successfully contacted cases that completed the interview. For the sample this rate is 46.21 percent.

The second rate (RR2) is very similar to RR1 except that in RR2, RF2 is adjusted for death and young age of the intended respondents (ADJ1). This rate is a refined cooperation rate. For the sample, it increases from 46.21 to 46.32 percent.

The third rate (RR3) takes into account those households that are never successfully contacted during the survey period. They are included in the denominator of the ratio. The denominator for this ratio includes: completed and partially completed interviews (CM), refusals (RF1 and RF2), call-backs (NA1), no-answers (NA2), and Spanish call-backs (SNA). By including the no-contact households without adjusting for ineligible, this rate is the most conservative of the four rates presented in Table 3. For the sample, this rate is about 26.70 percent.

The fourth rate (RR4) is similar to the RR3, but it takes into account adjustment for death and young age among the Spanish call-back cases (SNA), other call-back cases (NA1), and contacted cases from which no identifying information was collected (RF2). In addition, this rate is adjusted for ineligible (ADJ2) among the no-answer cases (NA2). For the sample this leads to an adjusted rate of 33.32 percent.

RR2 and RR4 are the two most often quoted rates with the former being generally referred to as the cooperation rate and latter referred to as the response rate.