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How to Use the Sample Surveys
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The Vermont Transportation Efficiency Network website contains several survey templates to help you better understand the transportation habits and needs of your community, workplace, or school. The provided language serves as a starting point – feel free to add or subtract questions as you see fit. We recommend that you always ask questions about the respondent's daily travel miles, vehicle miles per gallon, mode choice the day of the survey, and all modes used the past month. That data will help you calculate the economic and environmental impacts of your audience.

This guide includes tips on how to word questions, promote a survey, select a survey program, and use your data.

Five Survey Tips (by no means an exhaustive list)

1. **Avoid leading questions, biased language, and sensitive topics.**
Ex: Do you think Congress should repeal Obamacare and save the American family? What is your sexual orientation?
2. **Don't ask questions that won't help you, even if the topic is interesting to you. Survey respondents value their time. Measure only what matters.**
Ex: What is the color of your living room walls?
3. **Build in comment boxes where additional information or testimonials will help.**
Ex: What is your experience with The Big Bus?
Response: I love the Big Bus! It helped my family save over \$1,000 last year and the drivers are friendly and knowledgeable.
4. **Ask two to three basic personal questions to make sure you got a representative sample, but always include "I prefer not to answer" as a choice and ask them at the end.**
Ex: What is your age? What is your job title? What shift do you work?
5. **Avoid industry jargon.**
Ex: Use a term like "drive alone" instead of "single-occupancy vehicle."

For more tips, visit the Duke Initiative on Survey Methodology:
<http://dism.ssri.duke.edu/>.

How to Promote Your Survey

Different marketing approaches yield different response rates. We have ranked the following methods as high impact, medium impact, or a waste of time. These ratings are based on experience we have gained at Vital Communities. Your target audience might have different results.

High Impact

- (Workplaces) E-mail announcement, including an electronic link, from a company executive. The e-mail should explain the purpose of the survey, promise confidentiality, and give a realistic estimate of how long it will take to complete the survey.
- (Towns) Front Porch Forum or town listserv announcement, including an electronic link, from a respected and recognized community leader.
- (Schools) E-mail from the person (principal, teacher, etc.) from whom staff, students, and parents are accustomed to receiving announcements. For pre-high school students with questionable e-mail access, have teachers administer surveys during homeroom.
- Got a parking problem? Advertise your survey as a “Parking and Transportation Survey.”
- “Live” surveys given to captive audiences equipped with audience response devices.

Medium Impact

- Short article and link in a company or school e-newsletter.
- “Live” surveys in a lobby or lunch area after somebody announces the survey by e-mail.
- Distributing paper surveys at a school or workplace.¹
- Electronic link in a non-profit newsletter.

Waste of Time

- Survey URL written on a slip of paper and given to students or staff.
- Newspaper advertisement with survey URL.
- Basically, any written version of a URL.

¹ Remember that paper surveys may require many hours of manual data entry. Carefully consider the costs and benefits of administering a survey this way. One clear advantage, however, is the increased likelihood of reaching people who do not have easy access to e-mail, such as nurses at a hospital, retirees at a senior center, or residents of a homeless shelter.

Select a Survey Service

At Vital Communities, a large majority of our survey respondents (at least 75%) take their questionnaires electronically. We have used several different services to administer surveys and can offer advice if you're shopping for a survey tool.

Your choice of a survey tool should take the following into consideration:

- (1) Size of respondent pool
- (2) Need or desire to customize appearance
- (3) Need or desire to build logic or piping into a survey
- (4) Reporting requirements
- (5) Level of scrutiny/data assurances
- (6) Question types
- (7) Cost
- (8) Other Considerations

Size of Respondent Pool

Survey services range in the number of responses one can receive, typically over a month basis. Consider how many survey respondents you expect and check whether a company allows for subscription changes if you need more or fewer responses. Most do. Note that some of the free survey tools allow for very few respondents.

Customize Appearance

While some surveys are fine to administer with simple black text on a white background, you may want to consider a service that allows users to customize a header, background, font, size, and other features for a more professional look. Note whether a service allows users to save templates to avoid having to recreate the same look every time.

Logic and Piping

Logic and piping are advanced features that allow for more sophisticated data analysis and give respondents a more personalized and probably faster experience. Logic primarily works on an "if/then" model, meaning that *if* a respondent answers A, *then* a follow-up question to that response will appear. Similarly, one can hide questions from respondents who answer a certain way. For example, if someone reports that she walks to work every day, you might not want to ask her why she doesn't walk to work more often. Piping gives respondents a more personalized experience as well. For example, a question might ask, "which of these five brands of toothpaste do you prefer?" Later in the survey, a respondent will see "Thinking about [the brand chosen earlier], what do you like about this toothpaste?"

Are these features unnecessary for your needs? Don't buy them if you don't need them.

Reporting Requirements

Check to make sure that a survey tool gives you clear, understandable data. You might want to select a service that allows you to set how data are presented, such as in pie graph, bar graph, or other forms. Also check that the service allows users to download reports. Are you limited to PDFs? Then you'll probably want to have software that can edit a PDF. Some services allow downloads into Word, Excel, .csv, SPSS, and other file types.

Scrutiny and Data Assurance

Few people will likely want to take your survey over and over again, but a prize drawing might lure some repeat offenders. If you are concerned about this problem, check whether you can prevent multiple responses from the same IP address. If you are administering paper surveys as part of your effort, however, check to make sure there's some way that you as an administrator can still input data. A cache clear sometimes helps.

Question Types

Most people are familiar with check boxes, radio buttons, and open-ended questions. But what about other types? Consider whether you want ratings (ex: number of stars), sliders, pull-downs, and even visual preference questions.

Cost

Always a consideration, cost might be the most important factor when it's time to decide on a survey tool. Some options are free, but they tend to lack some advanced features. Some software costs thousands of dollars. You might not need the level of sophistication those tools can provide.

Other Considerations

Ease of use

Spell check

Built-in statistical analysis (averages, standard deviations, etc.)

How to Use Data

Uncover Barriers

One major intent of the sample transportation surveys is to uncover barriers that prevent people from carpooling, biking, walking, taking a bus or vanpool, and working from home. Look at the results and open-ended comments and you will likely see clear messages about issues people face. Sometimes a new project or marketing campaign can overcome a barrier. Other issues, such as people's housing choices, are out of the program manager's control.

Example barriers:

- I don't bike because my office is small and there's no place to put it → install bike racks.
- I would walk to school, but my parents won't let me → start a walking school bus.
- I don't know anyone who can carpool with me → promote Go! Vermont.
- I don't understand the bus schedule → promote Google transit.

Design a Campaign

The questions about people's attitudes and motivations (ex: why have you carpooled, taken the bus, etc.?) help inform the messaging for a promotional campaign. If 90% of people who carpool at company X do so to save money, tout the monetary benefits of carpooling. If only 5% cite environmental reasons, skip the Earth Day celebration.

Make Calculations

Let's calculate the environmental and ecological footprint of a workplace, school, or community. At Vital Communities, we estimate the impact of driving alone and do not measure the gasoline use and emissions of buses, carpools, or vanpools. Let's assume we got a good response rate of 70 employees at a 100-employee company, 56 of whom (80%) reported that they drive alone.

Gasoline Usage

Average reported gas mileage = 26 mpg

Average reported round-trip distance = 30 miles

$30 \text{ miles} / 26 \text{ mpg} = 1.15 \text{ gallons average each day}$

$1.15 \times 220 \text{ work days per year (IRS average)} = 253 \text{ gallons per year per person}$

$80 \text{ people drive alone} \times 253 \text{ gallons} = 20,240 \text{ gallons company-wide per year}$

$20,240 \times \$3.00/\text{gallon} = \$60,720 \text{ in gasoline costs per year}$

A year later, we survey and find 10 employees quit driving alone rate! Let's assume vehicle efficiency, the cost of gas, and distance traveled remained the same.

$70 \text{ people drive alone} \times 253 \text{ gallons} = 17,710$

$17,710 \times \$3.00/\text{gallon} = \$53,130$

$\$60,720 \text{ (year one)} - \$53,130 = \$7,590 \text{ in fuel savings}$

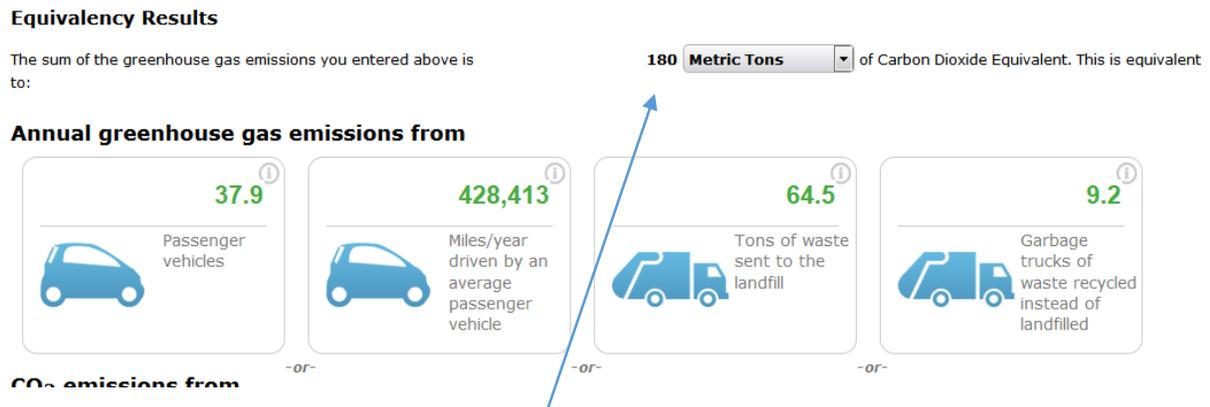
Again, this estimate is imperfect, but it gives us a reasonable estimate of fuel savings.

Emissions Estimate

The EPA has a great calculator for carbon dioxide emissions. Plug in the 20,240 gallons and change the “choose a unit” to gallons of gasoline.

The screenshot shows the EPA's "Greenhouse Gas Equivalencies Calculator" interface. The page title is "Clean Energy" and the sub-header is "Greenhouse Gas Equivalencies Calculator". The main heading is "Enter Your Data". There are two tabs: "If You Have Energy Data" (selected) and "If You Have Emissions Data". The input field contains "20,240" and the unit dropdown is set to "- choose a unit -". A green "Calculate" button is visible. Below the input field, there is a note: "Please note that these estimates are approximate and should not be used for emission inventory or formal carbon footprinting exercises. Read more about the caveats and explanations on the [Calculations and References page](#)".

Hit “Calculate.”



This company produces approximately 180 metric tons of carbon dioxide from its drive-alone commuting.

What about that 37.9 passenger vehicles figure? Don't 80 people drive alone to our hypothetical company? Remember the EPA's calculator does not know that we are looking at commuting alone. Its calculator makes assumptions about people's driving habits in general.

Questions, comments? Contact uvtma@vitalcommunities.org.