

**US Army Corps  
of Engineers**  
Huntsville Division

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**VISITOR SURVEYS FOR DEVELOPED  
RECREATION AREAS  
STUDENT STUDY GUIDE**

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# VISITOR SURVEYS FOR DEVELOPED RECREATION AREAS

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## POSTTEST

STUDENT: \_\_\_\_\_

GRADE/JOB SERIES: \_\_\_\_\_

JOB TITLE: \_\_\_\_\_

ORGANIZATION: \_\_\_\_\_

DISTRICT/DIVISION: \_\_\_\_\_

DATE: \_\_\_\_\_

FACILITATOR \_\_\_\_\_

ORGANIZATION: \_\_\_\_\_

DISTRICT/DIVISION: \_\_\_\_\_

**Instructions:** This test is designed to measure your overall knowledge of performing visitor surveys after you have completed this training program. Do not worry if you do not know all the answers on the test. Do the best you can and answer all the questions.

**Multiple Choice:** The following questions are presented in multiple choice format. There is a correct answer listed for each question. On the answer sheet provided, using a No. 2 pencil, completely blacken the oval indicating your response. If you wish to change an answer, erase your first answer thoroughly.

**NOTE:** The information requested on the first page and the top of the second page of the answer sheet should also be completed with a No. 2 pencil.

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## POSTTEST

1. What is the proper procedure for exiting the computer survey program?
    - a. Turn off computer.
    - b. Control, alternate, delete.
    - c. Escape to quit at the total number of axles prompt.
    - d. Escape to quit at the number of vehicles prompt.
  
  2. If the following were recorded: 5 people were in the car  
4 of these people had been swimming  
2 were sightseeing, 1 was waterskiing -  
Which of the following categories is a range error?
    - a. Boating.
    - b. Swimming.
    - c. Sightseeing.
    - d. Waterskiing.
  
  3. At the end of the survey period, the student will:
    - a. Depart the survey location.
    - b. Scan the park for vehicles that did not exit.
    - c. Report to the project coordinator's office for exit interview.
    - d. Take down and secure all survey materials and equipment.
  
  4. A Project Survey Coordinator should be contacted if:
    - a. More than 15 people are interviewed.
    - b. Difficulties are encountered with the survey site.
    - c. Little or no traffic occurs.
    - d. If the time block is cancelled because of rain.
  
  5. The proper order for survey forms to be turned in is:
    - a. As collected.
    - b. By ID number.
    - c. Survey site name, project activities, zip code and season.
    - d. Survey site name, for weekday and weekend, in order by ID and by season.
-

---

## POSTTEST

6. Where should an interviewer stand when conducting a traffic stop interview?
    - a. On shoulder of road, in direction of exiting traffic.
    - b. On shoulder of road, in direction of entering traffic.
    - c. On the side of the road, at the top of the hill.
    - d. On the side of the road as vehicles exit the boat ramp.
  
  7. You have the responsibility of providing the summer survey data files to the Project Survey Coordinator for Oak Park Recreation Area. Which of the following should be delivered?
    - a. 20AKPARK.DAY and 20AKPARK.END.
    - b. Merged file 20AKPARK.LFA.
    - c. 30AKPARK.DAY and 30AKPARK.END.
    - d. Merged file 20AKPARK.DBF.
  
  8. The proper way to introduce a visitor survey:
    - a. Ask if the visitor has been surveyed before; if not, proceed with the introduction.
    - b. Read the prepared introduction on either the paper form or computer screen.
    - c. Memorize introduction from Project Survey Coordinator.
    - d. Be friendly and courteous.
  
  9. If a threat to the personal safety of an interviewer occurs, whom should the interviewer notify as soon as possible?
    - a. Project Manager.
    - b. COR.
    - c. The nearest ranger.
    - d. Project Survey Coordinator.
  
  10. Visitors are camping overnight at the project, not at the recreation area being surveyed. What information should be collected?
    - a. Number of nights camping at the area.
    - b. Number of nights camping at the project.
    - c. Day use hours at the area.
    - d. Day use hours at the project.
-

---

## POSTTEST

11. When is computer data recorded by the surveyor?
    - a. When visitor enters the park.
    - b. At the end of the survey time period.
    - c. After the visitor has left the park.
    - d. After the visitor responds to the question asked.
  
  12. Questions about materials to be assembled for visitor surveys should be referred to:
    - a. Contract Park Attendant.
    - b. Project Survey Coordinator.
    - c. Park Ranger.
    - d. Project Manager.
  
  13. A survey is scheduled for 9:45 am - 12:10 pm, at Beach Cove. What time should you arrive at the survey site to begin setup of the site?
    - a. 8:30 am.
    - b. 9:45 am.
    - c. 9:35 am.
    - d. 10:00 am.
  
  14. At the completion of the survey, the survey data will be delivered:
    - a. As specified by the Project Survey Coordinator.
    - b. By air express or certified mail.
    - c. The day following the last survey time period.
    - d. To the nearest project manager's office.
  
  15. If during a traffic stop survey, a visitor begins a lengthy conversation about a problem, the proper response would be.
    - a. Be courteous, refer them to the project manager and continue interviewing other visitors.
    - b. Pull the vehicle over to the side and continue the discussion.
    - c. Go get help.
    - d. Promise to correct the situation and complete the interview.
-

---

## POSTTEST

16. Choose the correct file name for the weekend survey for Oak Park Recreation area during the summer season.
- 4OAKPARK.END.
  - 2OAKPARK.END.
  - OAKPARK.DAY.
  - 5OAKPARK.DAY.
17. Choose the best response to clarify a question about the number of persons in the vehicle being surveyed:
- How many people are with you?
  - How many people are physically in this vehicle at this time?
  - How many persons are in your household?
  - How many people are in your party?
18. A survey is scheduled for 9:45 am - 12:10 pm at Beach Cove. What time should you begin to take down the survey site?
- 12:20 pm.
  - 11:45 am.
  - 12:00 pm.
  - 12:10 pm.
19. The three meter readings always required for each survey site are:
- Beginning Monday, ending Monday, following Friday.
  - Weekly, monthly and on holidays.
  - Beginning Sunday, ending Friday, the following beginning Sunday.
  - Beginning Monday, ending Friday, the following beginning Monday.
20. A survey site can best be defined as:
- Interview locations designated by the survey plan.
  - A gatehouse.
  - Park entrance.
  - Where the interviewer chooses to stand to conduct the interview.
-

---

## POSTTEST

21. When should header information be recorded on ENG Form 4835?
- At the end of survey week.
  - Prior to beginning of the survey.
  - At end of survey season.
  - During the actual survey.
22. Computer-generated header data must be verified with:
- Operational Management Plan.
  - Contract scope of work.
  - Survey Schedule
  - Project Master Plan.
23. In which of the following documents would you find specific survey site instructions relevant to a visitor survey?
- Contract scope of work.
  - Master Plan.
  - Operational Management Plan.
  - Project survey plan.
24. A project can best be defined as:
- All water associated with water and flood control.
  - Land, water, and park resources.
  - Natural Resource Manager's Office and surrounding land.
  - City park.
25. The key data elements on ENG Form 4835 are:
- Vehicle class, length of stay, project and area activities.
  - ID, zip code, and survey log.
  - Vehicle class, zip code, survey site name.
  - Area activities, ID, zip code.
-

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## POSTTEST

26. What is the easiest way of insuring personal visibility during a survey?
- a. Wear blaze orange vest.
  - b. Wear a personal flotation device (PFD).
  - c. Stand on the road's yellow line.
  - d. Wear appropriate identification tags and hats.
27. Visitor surveys are important because:
- a. Visitation determines project budgets.
  - b. They identify what the visitor does at the project.
  - c. They determine what hours the project will remain open.
  - d. They determine the GS rating of the project manager.
28. Definitions of recreational terms can be found in:
- a. Engineering Regulation (ER) 1130-2-430.
  - b. Your Student Study Guide Glossary.
  - c. Engineering Pamphlet (EP) 1080-6.
  - d. Project folder map.
29. Appropriate attire for a contract interviewer during the summer season is:
- a. Cut-off jeans, open sandals, and a hat stating the name of the Corps project.
  - b. Personal flotation device (PFD), swimwear and mirrored sunglasses on Corps operated docks.
  - c. Lightweight shirts and slacks, mirrored sunglasses and proper, visible identification.
  - d. Lightweight shirts and slacks, enclosed shoes and proper, visible identification.
30. Which of the following is the preferred method of locating a survey site?
- a. Consult USGS quad sheets.
  - b. Consult the project map and survey plan.
  - c. Consult the project brochure.
  - d. Check with the county agent.
-

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## POSTTEST

31. Choose the courteous and correct response to a visitor's question: "Why are you stopping me?"
- "I already told you that."
  - "Because they pay me to do this!"
  - "We need your assistance to better manage this park."
  - "Sorry, I really don't know."
32. Which of the following are possible causes for the traffic meter to fail.
- Improperly grounded meter.
  - Broken hoses or wires.
  - Low battery charge.
  - All of the above.
33. As the visitor exits the recreation area, which of the following should the visitor see first?
- Lake.
  - "Warning - Survey Ahead" sign.
  - "Stop" sign.
  - Surveyor.
-

# VISITOR SURVEYS FOR DEVELOPED RECREATION AREAS

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## PRETEST

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GRADE/JOB SERIES: \_\_\_\_\_

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Instructions: This test is designed to measure your overall knowledge of performing visitor surveys before you get involved in this training program. Do not worry if you do not know all the answers on the test. Do the best you can, but it is better if you do not guess. Leave an answer blank if you do not know it.

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5. In which of the following documents would you find specific survey site instructions relevant to a visitor survey?
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  - Master Plan.
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## PRETEST

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## PRETEST

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  - b. 11:45 am.
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  - c. Report to the project coordinator's office for exit interview.
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-

---

**PRETEST**

30. Visitors are camping overnight at the project, not at the recreation area being surveyed. What information should be collected?
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Which of the following categories is a range error?
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  - b. Merged file 20AKPARK.LFA.
  - c. 30AKPARK.DAY and 30AKPARK.END.
  - d. Merged file 20AKPARK.DBF.
33. At the completion of the survey, the survey data will be delivered:
- a. As specified by the Project Survey Coordinator.
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  - c. The day following the last survey time period.
  - d. To the nearest project manager's office.
-



Cntrl #750

January 1992

# **VISITOR SURVEYS FOR DEVELOPED RECREATION AREAS**

## **Student Study Guide**

**Produced By:  
U.S. Army Corps of Engineers  
Nontraditional Training and Planning Division**

**Unless otherwise noted, the words, "he, him, or his" refer to both men and women.**

**Regulations and forms referenced in this guide were current as of January 1992. Students are cautioned to update their guides with current regulations and forms as they become available.**



## FOREWORD

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This training has been developed to assist Natural Resource Project Managers in training their personnel to survey visitors in developed recreation areas.

This student study guide was designed to be used as a workbook during the training session. It is intended that it be retained by the student as reference material.

The content of this study guide was developed based on the experience of Corps of Engineers personnel who have years of experience in surveying the visitor and who have assisted in the development of the Visitation Estimation and Reporting System (VERS) that utilizes the computer based Direct Data Entry System (DDES).

The US Army Engineer Waterways Experiment Station (WES) has been instrumental in the development of this training course. Specific inquiries about VERS or DDES should be directed to:

US Army Engineer Waterways  
Experiment Station  
ATTN: CEWES-EP-L  
3909 Halls Ferry Road  
Vicksburg, MS 39180-6199

Questions pertaining to interpretation and explanation of this guide and suggestions and improvements should be sent to:

Commander  
USAED-Huntsville  
ATTN: CEHND-TD-NT  
P.O. Box 1600  
Huntsville, AL 35807-4301

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# VISITOR SURVEYS FOR DEVELOPED RECREATION AREAS

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## INTRODUCTION — THE VISITATION FACTOR

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### The Customer and the Corps of Engineers

Visitors are Corps of Engineers customers. While they may trigger a traffic meter during a survey, these visitors also represent other factors. These factors help the Corps of Engineers decide how money is spent; for example, how many campsites, picnic tables, and showers are needed; how to plan for the future; and how the Corps can be of better service to the visitor.

The traffic—stop survey that you are collecting data for is a method of estimating recreational use at Corps projects. This information is essential for planning, management, and reporting purposes. There are two parts to collecting the survey:

- Visitor surveys
- Traffic meter recordings

While the traffic meter measures the volume of traffic entering an area, the visitor survey collects data from visitors. These two factors, when combined, represent a snapshot of how the project is used.

This student study guide was written to help you learn how to conduct these visitor surveys. Use this guide during your training but also keep it handy when you are out on the survey site. There are plenty of checklists and helpful reminders throughout the guide for your use in the field.

The guide is organized into four major modules; all except module 1 contain submodules.

#### **Module 1. Representing the Corps of Engineers**

#### **Module 2. Getting Ready for the Survey**

- 2.1 Collecting materials
- 2.2 Checking and reading the traffic meter
- 2.3 Setting up the survey site

#### **Module 3. Conducting the Survey**

- 3.1 Defining recreational terms
- 3.2 Reading prepared introduction and questions
- 3.3 Enter data on ENG Form 4835
- 3.4 Enter data on the computer

#### **Module 4. Wrapping It Up**

- 4.1 Taking down the survey site
- 4.2 Delivering the survey data

As you learn about the traffic-stop survey, you'll have a chance to reinforce that information by completing the assignments contained at the end of the submodules. In addition, you'll find a helpful list of references, a glossary, and a list of acronyms at the end of the guide.



## **MODULE 1 — REPRESENTING THE CORPS OF ENGINEERS**

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### **Introduction**

As an interviewer, you represent the U.S. Army Corps of Engineers. The persons you interview each day may have no other contact with a representative of the Corps — **YOU ARE THE ONE** who forms their images of the Corps. The image you convey — your dress, your attentiveness, your enthusiasm, and your knowledge of your job — combine to create an appearance of professionalism and put you and the Corps in a most positive light.

### **Objectives**

After completing this submodule, you will be able to:

- Explain to the visitor why they are being surveyed
- Determine the appropriate clothing to wear for the interview
- Determine what to do if visitors have problems

### **Why Survey?**

You're going to get this question: "Why are you stopping me?" Remember, you're asking visitors to spend some of their valuable leisure time answering your questions. Your response to their question should explain that their answers will help Corps managers and planners understand current use to help provide improved services and facilities at Corps recreational areas. Appreciate their input!

### **Dress for Success**

Your interview attire should reflect your professionalism and the setting. Your professionalism dictates clean, pressed, tasteful clothing in good repair. The recreational setting dictates informal attire such as shirts and pants and closed shoes. Make sure your identification tag is visible on your shirt. A hat with the Corps logo or project name would be appropriate, especially on sunny days. If you need sunglasses, don't wear the mirrored variety.

### **It's Your Job**

Your responsibility is to complete traffic-stop surveys in an efficient and professional manner. If a visitor begins a lengthy conversation about a problem, offer a solution or refer them to the project manager and gently lead the conversation back to the interview.



## MODULE 2 — GETTING READY FOR THE SURVEY

### Submodule 2.1 Collecting Materials

#### Introduction

The first stage in getting ready for the survey involves reviewing the survey plan and collecting the materials needed for the survey. Understanding where to find the survey plan and what equipment is needed is an important part of conducting surveys correctly. There are two methods for collecting information: 1) a paper format using ENG Form 4835; and 2) a microcomputer format, using the Direct Data Entry System (DDES).

#### Objectives

After completing this submodule, you will be able to:

- Determine where to find the survey plan for your project
- Determine what equipment is needed to conduct the survey
- Determine who to contact regarding questions about the survey

#### Review the Survey Plan

The first step in getting ready for the survey involves reviewing the survey plan. This plan, located in the project manager's office, contains information on what materials are needed for your specific survey site, any special instructions relevant to the survey area, area maps, and the survey schedule. Read through the survey plan carefully and ask your Project Survey Coordinator questions.

#### Assemble the Equipment

The survey plan may have an equipment checklist to help you gather all the needed equipment or it may identify special equipment needs. We've included a standard equipment checklist so you can get an idea of the equipment you may need. Double-check your list as you collect the equipment to make sure you don't forget something you may need when you get out to the site.

#### Clarify Questions

The Project Survey Coordinator will answer your questions about the survey, the survey site, and needed materials.

## Submodule 2.1 Collecting Materials

---

### Equipment Check List

- Points of Contact \_\_\_\_\_
- Emergency Phone Numbers \_\_\_\_\_
  
- Safety vest
- Identification badge or name plate
- Watch
- Survey plan or copies of:
  - 1) Survey schedules
  - 2) Survey area maps
  - 3) Special instructions for survey area
- "Stop" sign
- "Stop Ahead" sign
- Other specialty signs such as "Tourism Survey Ahead"
- Traffic cones
- Barricades
- Project maps and brochures
- Keys for traffic meter boxes
- Lights for night surveys
- Personal items such as: drinking water, snacks, hat, sun screen
- Other items \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### Items for Paper Surveys

- ENG Form 4835
- No.2 lead pencils and erasers
- Clipboard
- Folders or organizers
- Questionnaire

#### Items for Microcomputer Surveys

- Laptop Computer
- Extra computer batteries
- Floppy disks with:
  - 1) DDES
  - 2) Survey Area files
  - 3) Backup disks
- Computer stand

Figure 2.1.1 Equipment Check List



## MODULE 2 — GETTING READY FOR THE SURVEY

### Submodule 2.2 Checking and Reading the Traffic Meter

---

#### Introduction

The survey form (ENG Form 4835) was designed to collect data to convert meter counts into estimates of visitor use. This information is utilized to estimate recreation use at each Corps project for use in planning, management and reporting. As part of the traffic-stop surveys, you will need to understand the following: the two types of traffic meters, how to test to see if they are working, how to diagnose and solve simple problems that may occur with the traffic meter, and when to record traffic readings during the survey.

#### Objectives

After completing this submodule you will be able to:

- Assure the traffic meter is in working order
- Diagnose and solve simple problems with the traffic meter
- Record traffic meter readings during the survey

#### Types of Meters

There are two types of traffic meters that are used on Corps projects:

- **Pneumatic Hose Meters** — These types of meters utilize a rubber hose that is placed across the roadway. The pneumatic hose meter records the number of axles that cross. Therefore, a car crossing the meter will trigger two counts on the meter while a car pulling a double axle trailer will trigger four counts on the meter.
- **Magnetic Loop Meters** — Magnetic loop meters are triggered by metal objects and therefore count vehicles. In this way a car with a trailer is counted as a single unit.

Sometimes these meters are adjusted so that it takes either two axles or two vehicles crossing the meter to trigger a count of one. Check the survey plan to verify how each meter counts.

#### Assure the Meter is Working

Meters and batteries should have been tested the week before the survey. The best way to confirm the meter is working is to listen for the "click" made when a vehicle crosses the counter.

## Submodule 2.2 Checking and Reading the Traffic Meter

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Occasionally traffic meters will fail. Some of the most common reasons for this failure are:

- improperly grounded meter
- broken hoses or wires
- low battery charges

Remember to report all equipment failures to the Project Survey Coordinator immediately.

### Meter Readings

Meter readings are taken to determine the percentage of weekday traffic. This data will be used to determine what percentage of the total traffic was weekday and what percentage was weekend. As the interviewer, you may or may not have to collect these meter readings, so check your survey plan and confirm it with the Project Survey Coordinator.

During the week of the survey, the meter should be read:

- On the first Monday at approximately the beginning of time period one (Note: this is not the Monday survey period)
- On the following Friday at approximately the end of time period five
- On the Monday following the survey week at approximately the beginning of time period one.

You will need to refer to the survey schedule to determine the exact times of the beginning monday, ending friday, and following monday. See Figure 2.2.1 as an example.

If the meter does fail during the survey week, the meter should be read at the same times during the following week, unless directed differently by the Project Survey Coordinator.

**For The Paper ENG Form 4835:** All three meter readings must be recorded in the "Survey Log" on the first weekday and the first weekend survey form used at the area. You will need these readings to help you fill out the top of the survey form in Submodule 3.3.

**For The Microcomputer:** All three meter readings must be recorded separately and submitted with the disk data. Make sure the recorded meter readings contain the following information: meter and survey site locations, data file names, date, time and traffic count for each of the three required readings.

## Submodule 2.2 Checking and Reading the Traffic Meter

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### Assignment — Meter Readings

Based on the information provided in the survey schedule (Figure 2.2.1), record the day and time meter readings should be taken for the two meters.

#### Panther Paw Creek Meter Readings:

day	time

#### Piney Hill Picnic Area Meter Readings:

day	time

#### **Remember**

- You need to assure the traffic meter is in working order
- Report any meter problems to the Project Survey Coordinator
- Make sure all three meter readings are recorded.



## **MODULE 2 — GETTING READY FOR THE SURVEY**

### **Submodule 2.3 Setting Up The Survey Site**

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#### **Introduction**

After you have collected the survey equipment and tested the traffic meters, you are ready to set up the actual survey site. There are four major steps in the process designed to ensure that you are collecting surveys at the right time, in the right place, and in a safe and orderly manner.

#### **Objectives**

After completing this submodule you will be able to:

- Determine the location and time of your survey period
- Choose the preferred method for finding the survey site
- Know how to ensure your personal safety
- Properly set up traffic control devices for the survey

#### **When and Where to Survey**

At each survey site, surveys are conducted over an entire week, Monday through Sunday. The Project Survey Coordinator will provide you with a detailed survey schedule listing the locations and times of the survey periods. If your survey period is scheduled from 9:45 a.m. to 12:10 p.m., at Panther Paw Creek, you must start interviews at 9:45 a.m.. This means that you must allow plenty of time before your survey period starts to collect the necessary equipment and then to find the site and set up the equipment. In order to get all the survey equipment set up, you should arrive at the site at least ten minutes before you are to start surveying (9:35 a.m. in the above scenario). Allow yourself plenty of time to collect the survey equipment and travel to the site.

#### **Finding the Survey Site**

Survey sites are located on roads exiting recreation areas. Since there may be more than one location where surveys are being conducted, you'll need to make sure you find the right site. Use a project map and the survey plan to find your survey location. The survey plan map for the area will identify the survey site designated for that area. Your understanding of how to set up a survey site will assist you should any unexpected problems occur. If you have questions, ask the Project Survey Coordinator.

## Submodule 2.3 Setting Up The Survey Site

### Playing it Safe

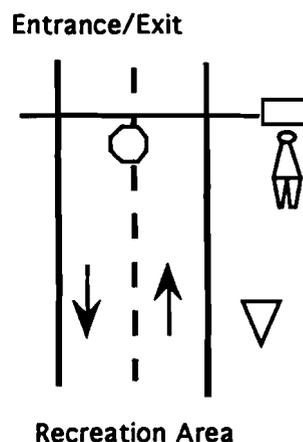
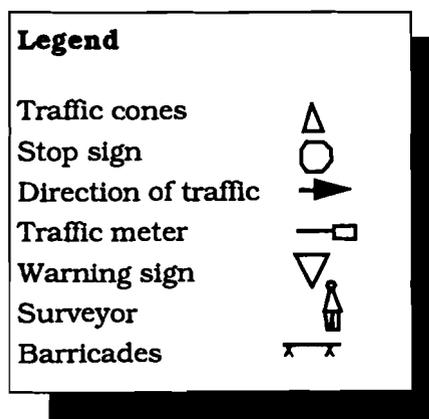
Since you are going to be stationed beside moving traffic you have been provided with equipment and procedures to ensure your personal safety. Follow the specific safety directions in your survey plan and play it safe.

You'll want to make sure you are both visible and safe so put on your blaze orange vest as soon as you reach the site. This vest, the traffic cones and the warning signs will help make you more visible and warn oncoming traffic of your location but you'll also need to position yourself in a visible and safe location. Stand on the shoulder of the road facing exiting traffic. This means that you will conduct interviews through the passenger window.

If you have questions about the safety procedures or if there is an emergency, contact the Project Survey Coordinator as soon as possible.

### Setting up the Equipment

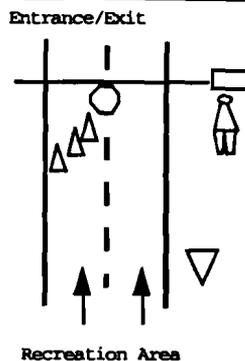
You'll want the survey site to be safe, comfortable, and efficient. Survey sites are normally located beside permanent traffic meters. Flat, straight road segments are preferred so that you and the oncoming traffic can see each other. You will be provided with a series of signs, barricades and traffic cones. The survey will describe how to set these signs up. Visitors exiting the recreation area should encounter the warning signs first, like "Prepare to Stop" or "Tourism Survey Ahead" before they encounter the "Stop" sign and the actual survey location. Since each survey site will be slightly different, you will need to consult your site's survey plan to determine how to set up the signs; however, the following diagrams will show you how survey sites are often set up.



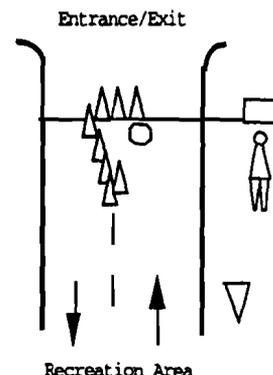
- Two lanes, two-way traffic—The survey site should be similar to this illustration.

## Submodule 2.3 Setting Up The Survey Site

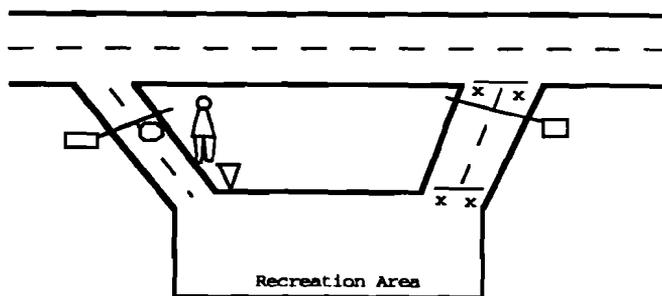
- Two lanes, one-way traffic — In this situation it will be necessary to close off one lane of traffic. You will also need warning signs for lane closure ahead in addition to survey/stop warning signs.



- Two-way traffic, wide entrance — If surveying at a wide entrance, it will be necessary to channelize traffic into one exiting lane.



- Recreation area with two or more entrance/exits — If an area has two exits, but only one is to be surveyed, the others must be blocked during the survey. Note: Three meter readings will be required from both meter locations.



While your survey plan will contain the particulars on how your survey site is to be set up, here is a general procedure.

1. Arrive at the survey location early enough to set up the equipment and perform other duties before the designated starting times.
2. Put on your orange blaze vest to ensure your safety.
3. Set up the warning signs and other traffic control devices.
4. Determine the location of the nearest phone or radio to use if you need assistance or in the event of an accident or other problems.
5. Make sure there is enough room for incoming traffic to pass and for exiting cars to wait.

## Submodule 2.3 Setting Up The Survey Site

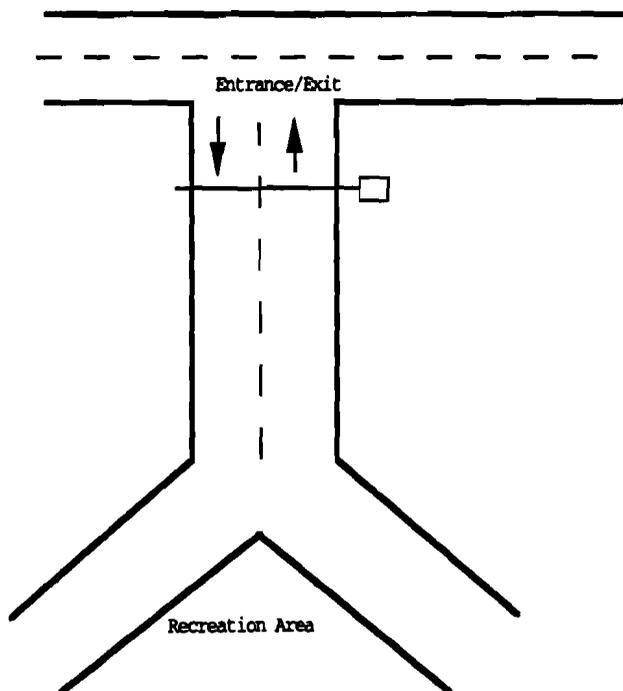
6. Stand on the shoulder of the road, on the side that traffic is exiting. Conduct your survey through the passenger side of the vehicle.
7. Once you have the site set up, double check to make sure you have all the needed equipment and have followed the directions in the survey plan.
8. Contact the Project Survey Coordinator in case of difficulties in either setting up or conducting surveys at the survey site.

### Assignment — Set Up

1. Using the equipment below, set up the survey site on the map.

#### Equipment List

Traffic cones	△
Stop sign	○
Direction of traffic	→
Traffic meter	—□
Surveyor	⦿
Barricades	—X—
Warning sign	▽



#### Remember

- Consult your survey plan to determine the location and time.
- Locate your survey site using the project map and survey plan.
- Arrive 10 minutes before your survey period.
- Wear your blaze orange safety vest.
- Stand on the shoulder of the road facing exiting traffic.
- Check to see you have all the equipment.
- Lay out the survey equipment according to the plan.
- Contact the Project Survey Coordinator in case of an emergency or any problems.



## MODULE 3 — CONDUCTING THE SURVEY

### Submodule 3.1 Defining Recreational Terms

#### Introduction

During the course of the survey, you will need to define a number of recreational terms to visitors. Providing a clear, concise and correct definition of these terms will assist the visitor in answering questions correctly. In addition, you will need to understand these terms thoroughly so that you can correctly complete the questionnaire.

#### Objectives

After completing this submodule, you will be able to:

- Correctly define recreational terms included in the survey
- Know where to check for additional definitions

#### Definitions

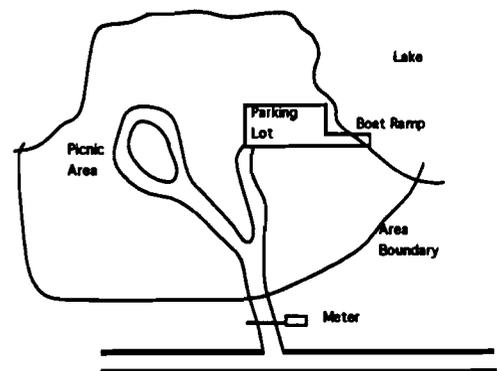
**Project** — The project consists of the reservoir or lake and surrounding lands owned by the Corps. The Project Survey Coordinator will define the limits of the project for you.

*Example Phrasing: “Good Time Lake includes all of the water and surrounding lands that are owned by the U.S. Army Corps of Engineers from the dam and spillway to ten miles east of Emerald City. Other recreation areas at this Corps project include the camping area managed by the state that is located further up this road and the visitor center off Highway 35.”*

**Recreation Area** — Within a project are located various recreation areas for camping, picnicking, fishing, boating, etc. Each of these recreation areas typically has either a single road that serves as the entrance and exit (Figure 3.1.1) or multiple accesses that lead to and from the area.

It is important for visitors to understand that the recreation area includes the entire recreation area (including sub-areas). If the area has more than one entrance or different sub-areas, you will need to either point to the areas that are included (if visible) or use a map to explain what is included in the recreation area.

*Example Phrasing: “This recreation area consists of the locations I have circled on the map, including the picnic area, parking lot, and boat ramp.”*



**Figure 3.1.1** Recreation Area

## Submodule 3.1 Defining Recreational Terms

**Survey Site** — The survey site is the location where the interviewer stands to conduct the survey. This survey site is usually located near a traffic meter. If a recreation area has more than one road serving as both entrance and exit, it may have more than one meter location and survey site.

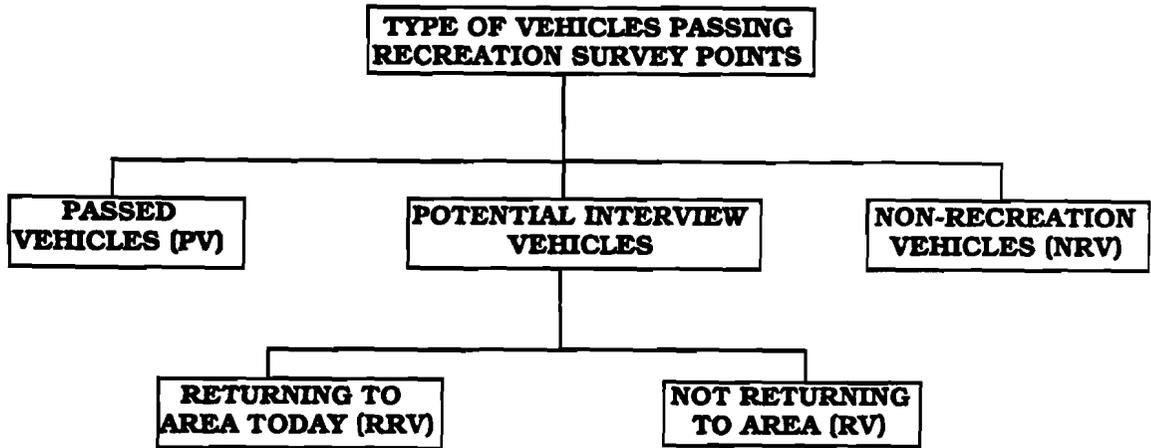


Figure 3.1.2 Vehicle Types

**Vehicle Types** — All vehicles that cross the traffic meter during the survey fit into one of three categories: potential interview vehicles (RV and RRV), nonrecreation vehicles (NRV) or passed vehicles (PV).

Potential interview vehicles consist of: 1) Area Recreation Vehicles (RV) — vehicles whose occupants participated in recreation in the surveyed area and will not return to the area that day; and 2) Return Recreation Vehicles (RRV) — vehicles whose occupants participated in recreation and will return to the area sometime during that day.

Nonrecreational vehicles (NRV) are vehicles whose occupants are not participating in recreation in the surveyed area. If the vehicle occupants are participating in recreational activities at another recreation area and are just passing through your survey area, the vehicle is a nonrecreational vehicle in your area. Nonrecreational vehicles also include Corps vehicles, commercial vehicles, concession vehicles, law enforcement vehicles, etc.

Passed vehicles are those vehicles that are not surveyed (passed): 1) because the person contacted in the vehicle refuses to be surveyed, or 2) because enough traffic backs up so that a lengthy delay for other visitors occurs. For more information about handling passed vehicles, see submodules 3.3. and 3.4.

Bicycles, motorcycles, or three-wheelers that activate the traffic meter must also be interviewed. Check with your survey coordinator to see how to handle these vehicle types.

## Submodule 3.1 Defining Recreational Terms

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### Assignment — Recreation Definitions

1. Write a definition for the area you will survey that you can use to explain to the visitor about the recreation area.

2. For each of the scenarios written below, determine the vehicle type; e.g., recreational (RV or RRV) or nonrecreational vehicle (NRV).

- A. A car driven by a concessionaire employee going home for the day.
- B. A car load of local residents who state they didn't do any recreational activities but just stopped to look around for a few minutes. They are not returning.
- C. A van load of campers from the campground who are going into town to do laundry for the day.
- D. A motor home driven by a family who just stopped for a picnic and are on the way to visit relatives.
- E. A truck containing the Project Survey Coordinator drops by to see how the surveys were going.
- F. A jeep with some windsurfers in it who were trying to catch some wind just off the launch ramp in your area. They plan to come back later today if the wind picks up.

#### Remember

- Other terms utilized in the survey are defined in the glossary.



## MODULE 3 — CONDUCTING THE SURVEY

### Submodule 3.2 Reading Prepared Introductions and Questions

---

#### Introduction

Conducting the survey requires that you use the precise wording and order of the questions on the questionnaire (either in paper form or on the computer screen). In order for you to collect accurate information, you must be careful to use the exact wording required and not lead the visitor to a biased response. This submodule will help you practice giving an introduction and wording the questions correctly to the visitor.

#### Objectives

After completing this submodule, you will be able to:

- Correctly introduce the survey to the respondent
- Clearly and concisely ask the respondent survey questions
- Clarify interview questions without leading the visitor

#### Interviewer Introduction

When you stop a vehicle, you will need to introduce yourself to the visitors and ask for their cooperation in the survey. A standard introduction is provided at the top of the questionnaire on either the paper form or the computer screen for you to read to the visitor.

HELLO. MY NAME IS \_\_\_\_\_. I AM WITH THE CORPS OF ENGINEERS.  
WE ARE SURVEYING VISITORS AT \_\_\_(Project Name)\_\_\_ SO THAT WE CAN  
BETTER SERVE YOUR NEEDS. MAY I TAKE A FEW MINUTES OF YOUR TIME  
TO ASK YOU SOME QUESTIONS?

#### Questions

Questions are indicated on the survey questionnaires. The survey form should be used in conjunction with the questionnaire. It is important that you read these questions as they appear, and follow the instructions provided for you on the questionnaire.

Sometimes when you ask a question the visitor won't understand and you will need to clarify the question. It is important that you do not rephrase the question in such a way that leads the visitor to provide you with a biased response. Leading the visitor this way may guide the visitor to understand the question differently than it was

## Submodule 3.2 Reading Prepared Introductions and Questions

---

intended, or it may provide them with clues to give you an answer they think you want. If you need to clarify the question, first try simply repeating it. If that doesn't work, try to find a way to clarify the question without leading the visitor. Some of the key components to the traffic-stop survey questions are: the place (e.g., project or area); the time frame (e.g., the trip or the day); and the activity.

### Assignment — Wording Questions

Some of the questions from the survey form are written below in caps. Circle the best response to clarify each question. You can get the answers from your facilitator.

#### ENG Form 4835

1. DID YOU USE THIS AREA FOR RECREATION TODAY?
  - a. Did you participate in recreation activities at this area today?
  - b. Did you participate in recreation activities here today?
  - c. Did you do anything like sightsee, fish, camp, or picnic here today?
2. WILL YOU BE RETURNING TO ANY RECREATION AREA ON THIS LAKE TODAY?
  - a. Are you coming back here today?
  - b. Do you intend to go over to the picnic area or the camping area today?
  - c. Do you plan to return to any of the recreation areas at the project today?
3. ON THIS TRIP, HOW MANY NIGHTS HAVE YOU CAMPED AT THIS AREA?
  - a. How many nights did you camp in this area on this trip?
  - b. Did you stay 1 night, 2 nights, or more at the campground?
  - c. How long did you stay at the campground?
4. HOW MANY HOURS DID YOU SPEND AT THIS AREA TODAY?
  - a. How long have you been at this area?
  - b. What time did you enter the area today?
  - c. How long have you been here?
5. HOW MANY PEOPLE PICNICKED (CAMPER AT A LOCATION OTHER THAN YOUR CAMPSITE)?
  - a. How many in this vehicle picnicked? (campers - at a location other than your campsite)
  - b. How many of your group picnicked? (campers - at a location other than your campsite)
  - c. Did you picnic today?
6. HOW MANY PEOPLE PARTICIPATED IN THE FOLLOWING ACTIVITIES DURING THIS VISIT TO THE LAKE?
  - a. Did you activity today?
  - b. How many in your vehicle activity today?
  - c. How many in your vehicle activity during this visit to the lake?
7. IS THIS THE ONLY AREA THAT YOU HAVE BEEN TO FOR RECREATION DURING THIS VISIT TO THE LAKE?
  - a. Did you visit any other areas on this trip?
  - b. Did you only recreate here in this area during this visit?
  - c. Have you been any place else here at the lake?

## Submodule 3.2 Reading Prepared Introductions and Questions

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8. FORTHOSE ACTIVITIES YOU PARTICIPATED IN AT THE LAKE, HOW MANY PEOPLE PARTICIPATED IN THOSE ACTIVITIES OR USED THOSE FACILITIES AT THIS AREA?

- a. Of all the \_\_\_ (rec. activity) \_\_\_ your group has done during this visit to the lake, how many of your group did it in this area?
- b. How many of your group \_\_\_ (rec. activity) \_\_\_ here?
- c. Did you \_\_\_ (rec. activity) \_\_\_ in this area?
- d. I'll read back the activities you told me you participated in at the project. Please tell me if you participated in that activity in this area and how many participated.

### Computer Format

1. WAS GOOD TIME LAKE YOUR PRIMARY DESTINATION ON THIS TRIP?

- a. Was this the only place you visited?
- b. On your travel to Good Time Lake or on your trip home, did you or are you going anywhere else?
- c. Was Good Time Lake the major place you visited on this vacation?

2. HOW MANY PEOPLE IN THIS VEHICLE HAVE SPENT OR PLAN TO SPEND ANY NIGHTS AWAY FROM HOME IN A COMMERCIAL ACCOMMODATION WHILE ON THIS TRIP?

- a. How many stayed overnight somewhere else?
- b. How many of you stayed overnight at a commercial accommodation since you left home?
- c. If you stayed overnight, where did you stay? How many stayed there?

3. DID YOU PARTICIPATE IN WATERCRAFT ACTIVITIES WHILE AT THIS PROJECT?

- a. Did you go boating or waterskiing at the project?
- b. Did you use your boat here at Good Time Lake?
- c. Did you do any type of boating at Good Time Lake? What type of activities?

4. DID YOU USE PANTHER PAW CREEK AREA FOR RECREATION TODAY?

- a. Did you do any activities here today?
- b. Did you do anything here at Panther Paw Creek today?
- c. Did you do anything at the project?

5. DID YOU USE A BOAT RAMP AT GOOD TIME LAKE?

- a. Did you launch your boat from a boat ramp?  
Where?
- b. Did you use a boat?
- c. Have you used a boat ramp?

### Remember

- Read the introduction and questions exactly as they are worded.
- If you need to clarify a question, first try repeating it.
- If you must reword a question, word it so that it doesn't lead the visitor.
- Remember to thank visitors for their cooperation.



## Submodule 3.3 Entering Data On ENG Form 4835

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**Project Name:** Enter the project name in blocks 26-45 starting in the left hand block.

**Project NRMS Code:** Enter the NRMS project code in blocks 1-5. The project name and project NRMS number will be the same for all survey forms from a single Corps project.

**Survey Site:** In blocks 46-70, enter the name of the survey site location noted from the Survey Schedule. If there is more than one traffic meter located in the recreation area, make sure that the name of the individual survey site associated with the meter is listed rather than the name of the recreation area.

**Area NRMS Code:** Enter the NRMS area code in blocks 6 - 8. You can find this code on your survey plan.

**Weekend/Weekday:** In block 9, enter the day of the week information as follows:

- 1 = Weekday (Monday - Friday)
- 2 = Weekend (Saturday and Sunday)

**Survey Season:** In block 10, enter the season in which the survey is being conducted where:

- 1 = Spring
- 2 = Summer
- 3 = Fall
- 4 = Winter
- 5 = Holiday

Check your project's survey plan to identify the months included in a given season. The holiday code should be used in place of a season code only when data is collected during a holiday weekend (e.g., July 2 - 4).

**Survey Date:** Enter the Monday date of the survey week from the survey schedule in block 11 - 16. This same date should be entered on all survey forms conducted that week. The date is entered in military format as day, month, year (DD/MM/YY).

**Percent of Total Traffic:** Calculate the value to be placed in blocks 17 - 18 after taking the final Monday traffic meter reading (see page 8). Enter the percent of total traffic on weekdays on both the weekday and weekend survey forms. Calculate this value as follows:

$100 \times$

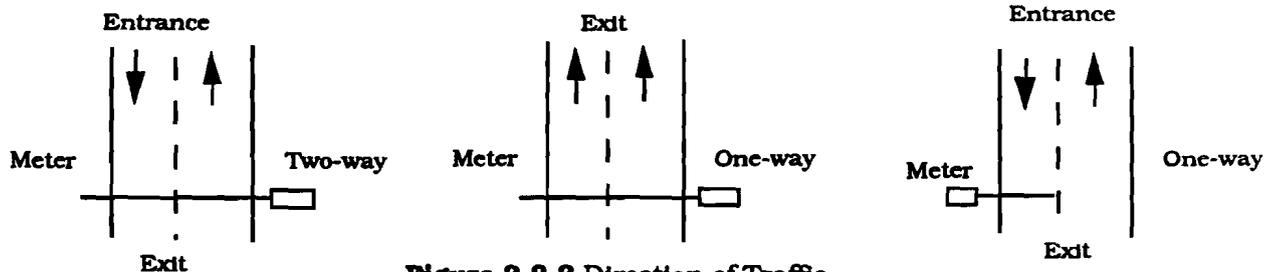
$$\frac{(\text{Friday Meter Reading} - \text{Beginning Monday Meter Reading})}{(\text{Ending Monday Meter Reading} - \text{Beginning Monday Meter Reading})}$$

**Type of Meter:** Enter the type of traffic meter in block 19 where:

- 1 = Pneumatic hose meter
- 2 = Magnetic loop meter

## Submodule 3.3 Entering Data On ENG Form 4835

**Direction of Traffic:** Enter the traffic direction crossing the meter in block 20 where:  
 1 = One-way traffic and 2 = Two-way traffic



**Figure 3.2.3** Direction of Traffic

**Interviewer(s):** Enter your name in this block.

**Sheet Number:** Enter the survey form number consecutively starting with 1. For weekday surveys, the total number of sheets can be entered after the Friday survey period. Numbering should begin again on Saturday with 1. On weekends, the total number of sheets can be entered after the last Sunday survey period is over.

**Remarks:** Use this space freely to make a note of any unusual survey conditions. Provide a key to abbreviations you might use in a legend.

**Survey Log:** On the first weekday or weekend survey form for each survey location, make a note of:

- The meter type (pneumatic hose or magnetic loop)
- Traffic flow crossing the meter (one way or two way)
- Meter calibration
  - Magnetic loop meters may count:
    - 1 count per vehicle
    - 1 count per 2 vehicles
  - Pneumatic hose meters may count:
    - 1 count per axle
    - 1 count per 2 axles
- All three meter readings
- Anything that might influence the survey (weather, accidents, road repairs, etc.)
- Any changes in survey times or places (explain carefully)

REMARKS	
<b>SURVEY LOG:</b> Meter Type: <i>pneumatic</i> Traffic flow crossing meter: <i>1 or 2 way</i> Meter Calibration: 1 count per <i>axle</i> Meter Readings:	
<i>6/7</i>	<i>Monday: 7:30 a.m. 5905</i>
<i>6/11</i>	<i>Friday: 9:30 p.m. 6102</i>
<i>6/14</i>	<i>Monday: 7:30 a.m. 6249</i>
<i>Begin 6/9 1545 KP</i>	
<i>1600</i>	
<i>1700</i>	
<i>1800</i>	
<i>End 6/9 1820 KP</i>	

**Figure 3.2.3** Survey Log

## Submodule 3.3 Entering Data On ENG Form 4835

### Step 2. Recording the Survey Data

Once the header is filled out, you are ready to collect data from park visitors. The survey records information on vehicle occupants, specifically: vehicle class, length of stay, project activities, and area activities. You must ask questions exactly as they appear on the survey questionnaire and record the answers in pencil on ENG Form 4835. Do not rephrase the question or prompt visitors to respond. Remember to survey **all** vehicles exiting the recreation area past the survey site during the scheduled period.

**Remarks:** Use the remarks section to record the start and end times of the survey period. In addition, record an hour on the hour on the first available blank line. For example, in a survey period 7:10-9:10 the remarks column would show:

1st line of data	Begin, 7:10, Thurs, Your Initials
data lines	
1st available blank line; data	8:00
data	9:00
last data line	End 9;10, Thurs, Your Initials

Figure 3.3.4 Remarks Column

**Vehicle Identification:** Use columns 11-13 to identify individual survey entries. For each survey location, begin on Monday with vehicle ID. number "001" and number consecutively through the Friday survey period. For weekend sampling, start again with number "001" on Saturday and number consecutively through the last survey period on Sunday. Remember that you must use a separate line of data for each and every exiting vehicle that crosses over the traffic counter (except for vehicles whose sole purpose is to check on the survey crew).

**Introduction:** A standard introduction is written at the top of the survey questionnaire to assist you in introducing yourself and gaining the cooperation of visitors in the survey. The key elements of the survey introduction include:

- Your name
- Your association with the Corps
- The reason for the survey
- A request for the visitor's participation
- That a few moments of their time is required.

**Note:** There will be times when the survey never reaches columns 15, 16, 17, 20, 21, and 56. It is not necessary to fill in these fields if the survey ends prior to reaching that column. If the survey reaches that column, however, do not leave that column blank. Record either a "0" or "1" as appropriate. Responses in other columns, however, may be left blank when the response is "no" or "none."











## Submodule 3.3 Entering Data On ENG Form 4835

### Assignment — Data Entry

Check your ability to enter and edit data correctly by recording the following scenario.

1. Based on the information provided in the sample survey schedule below fill out the header for a weekday survey on ENG Form 4835.

2. Now review the data entered in the first five lines of data on the form and circle any mistakes you might find.

**SURVEY SCHEDULE**      **PROJECT NAME:** Good Time Lake      **WEEK OF:** AUGUST 5 - 11      **AREA NRMS #:** Q14      **SURVEY SITE NAME:** Panther Paw Creek

**TIME**      **MONDAY**      **TUESDAY**      **WEDNESDAY**      **THURSDAY**      **FRIDAY**      **SATURDAY**      **SUNDAY**

1 0710— 0950		Panther Paw					Panther Paw
2 1005— 1240			Panther Paw			Panther Paw	
3 1225— 1530	Panther Paw						Panther Paw
4 1545— 1820				Panther Paw		Panther Paw	
5 1935— 2110					Panther Paw		Panther Paw

**Figure 3.3.10** Survey Schedule

Season = Summer  
 Meter Type = Pneumatic  
 Direction of Traffic = 1 way  
 1 count per axle





## MODULE 3 — CONDUCTING THE SURVEY

### Submodule 3.4 Entering Data On Computer

---

#### Introduction

Some projects will utilize a computer-generated questionnaire program, the Direct Data Entry System (DDES), to enter data directly on site during the survey process. If you are using the computer survey program, you will need to understand not only the data entry process, but also the computer operations necessary to utilize this program. While direct computer entry of survey data eliminates problems of legibility, it is just as easy to code your data improperly. Make sure you understand the process and enter the data carefully and accurately. If your information is incomplete or unclear, it may render the data useless.

The DDES version of the Traffic Stop Survey was designed to ease the labor in conducting the surveys and eliminate handwritten forms that have to be edited and coded later. The program is designed so that you can follow it without having to make any decisions about order or the wording of questions.

There are four basic steps in the computerized data entry process:

- Opening the correct computer file for data entry
- Verifying the information in the header with the survey schedule
- Recording the survey data
- Exiting the program properly

Throughout this Submodule, examples of a fictional survey site will be used to clarify the instructions. Examples as they might appear on the computer screen will be boxed and in **bold** type. Things that you need to type will be underlined. In addition, you will need to understand the following symbols or special keys.

**ALT** — This designates the alternate key on the keyboard and is used in some commands.

**RETURN** — The return or enter key is used after you type most responses in order to move you on to the next question on the screen.

**ESC** — The escape key allows you to exit from the program.

**F1 — F10** — Your computer will have a series of function keys on it. These keys are designated with an "F" followed by a number and they are used for giving some commands to the computer.

## Submodule 3.4 Entering Data on Computer

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### Objectives

After completing this submodule, you will be able to:

- Correctly open the proper file on the computer
- Verify the header information
- Accurately record survey data
- Exit the program properly

### Assumptions

Before you start entering the data on computer, the following items are assumed:

1. The DDES project and area files have been configured by the Project Survey Coordinator.
2. The Laptop microcomputer is equipped with a minimum of:
  - DOS 3.2 or higher
  - 640 K of RAM
  - Hard disk, 20 megabytes
  - One internal 3.5" floppy drive
  - Battery operated
3. You have a working knowledge of DOS.

### Setting Up the System

<pre><u>c:</u> <u>cd \</u> <u>md \survey</u> <u>cd \survey</u></pre>	Go to the hard disk Change to the root directory Create a survey subdirectory Change to survey subdirectory
<pre><u>copy a:*. * c:\survey</u></pre>	Load software
<pre><u>cd \survey</u> <u>ddes</u></pre>	Run program

## Submodule 3.4 Entering Data on Computer

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### Step 1. Select Item 1

Using the arrow keys, select item 1 — conduct survey.

<b>1 Conduct Survey</b>
<b>2 Area Configuration</b>
<b>3 Project Configuration</b>
<b>4 File Maintenance</b>
<b>5 Exit</b>

### Step 2. Select the survey period.

Next you will be asked if the survey is a weekday (1) or weekend (2) survey. If you were collecting data for a weekday survey, enter a "1" here. Then a screen will appear listing the survey files created by your supervisor.

#### Identifying file names

- Weekday survey files will end with the suffix .DAY, while weekend survey files will end with the suffix .END.
- The season the survey was conducted is noted by a number between 1 and 5 at the beginning of the file name (Spring = 1, Summer = 2, Fall = 3, Winter = 4, Holiday = 5)
- The 7 letters that follow the season number on the file are the area name. Note: Sometimes the area name is shortened because it is limited to 7 characters. The Project Survey Coordinator will identify which files are associated with each survey site.

<b>Files located on the C drive</b>
-------------------------------------

<b>2PANTPAW.DAY      2PINEHIL.DAY</b>
---------------------------------------

### Step 3. Select the Appropriate File

If you were collecting data at the Panther Paw area using the arrow keys, you would highlight "2PANTPAW.DAY" and press Enter.

### Step 4. Verifying the Header Information

The file you selected, "2PANTPAW," will load into the computer and a screen similar to the one below will appear.

HEADER DATA AS ENTERED	
PROJECT NAME: GOODTIME LAKE	PROJECT NRMS NO. : 10203
AREA NAME: PANTHER PAW CREEK	AREA NRMS NO. : 123
WEEKDAY SURVEY	SITE NAME: SAWHORSE ROAD
MONDAY DATE: 03/26/1991	SEASON: SUMMER
METER TYPE: PNEUMATIC	TRAFFIC: ONE WAY
SEASONAL QUESTIONS ASKED; HUNTING, ORV RIDING	
OTHER ACTIVITIES: VOLLEYBALL, SUNBATHING	
ASK OTHER OVERNIGHT: YES	MULT AREAS:2
HIT RETURN WHEN READY	

The information written on this screen is called the header information. It describes the survey site where the survey is being conducted. You need to verify this information with the data provided to you in your survey schedule. The following information is provided as guidance for you to understand the variables in the header.

**PROJECT NAME:** The name of the Corps project.

**PROJECT NRMS No.:** This is the Natural Resource Management System (NRMS) code that is distinct to this project. The number can be found on the survey schedule.

**AREA NAME:** The name of the recreation area where you will be collecting data.

**AREA NRMS No.:** The area NRMS number can be found on your survey schedule and is unique for this project.

**WEEKDAY SURVEY:** This denotes that the survey will be conducted from Monday through Friday. "WEEKEND" survey will appear when an ".END" file is selected indicating a Saturday or Sunday survey.

**SITE NAME:** Some recreation areas (e.g., Panther Paw Creek) have more than one survey site because they have more than one road entering and exiting the area. This site name then will be specific to the area where you will collect data and where the traffic meter is located. The same survey site name will be used even if there is more

## Submodule 3.4 Entering Data on Computer

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than one interviewer at the site, but the file names would be different.

**MONDAY DATE:** This is the date of the first Monday of the survey.

**SEASON:** Season of survey is coded as follows where:

- 1 = Spring
- 2 = Summer
- 3 = Fall
- 4 = Winter
- 5 = Holiday (Holiday weekend use only)

**METER TYPE:** Identifies the type of traffic counter in the area. A pneumatic hose meter is coded as a "1" while a magnetic loop meter is coded as a "2."

**TRAFFIC:** This is the direction that traffic is traveling over the meter. A "1" designates one-way traffic while a "2" designates two-way traffic.

**SEASONAL QUESTIONS ASKED:** These are optional questions that were chosen by the Project Survey Coordinator as appropriate for this project during this survey season. Don't worry, these questions will be asked in the order and sequence required.

**OTHER ACTIVITIES:** These are three possible optional questions that the Project Survey Coordinator has chosen to include in the survey. Don't worry about these at this point, as they will be automatically inserted into the survey form. These questions will appear in the form "How many people were..." It may be necessary to rephrase these questions into a format more easily understood.

**ASK OTHER OVERNIGHT:** This is also an optional question regarding overnight use other than camping, for example, houseboat or cabin rental. The Survey Coordinator will provide instructions for this type of use.

**Is this the correct file? (Y/N)**  
**Enter 'Y' to begin survey.**  
**Enter 'N' to select another file.**

If you selected the correct file in step one and all the information in the header appears to be correct, enter "Y". If you enter a "N" at this point, you will have a chance to return to step one and select the correct file. If you select "yes," the following screen will appear and you can choose either to start the survey now or to discontinue.

## Submodule 3.4 Entering Data on Computer

---

Next, you will be asked to enter your name.

**Enter interviewer's name: JANE DOE**

You will then be asked to enter the correct date and time. The computer's current date and time will be displayed and if they are correct, all you need to do is hit the return key.

If the computer clock is not correct, you **must enter** the date and time that the survey is being conducted. You must use the same form, as displayed on the screen, to enter the date and time.

**Current date is Thu 3-29-1991  
Enter new date (mm-dd-yy): 3-26-1991**

**Current time is 14:45:14.94  
Enter new time: 13:00**

Now that all the pre-interview data has been entered and the header confirmed, you are ready to begin the interviews.

### **Step 5. Interview and Record Survey Data**

#### **Vehicle Identification and Introduction**

Once you have entered the date and time above you are ready to start surveying. The next screen gives you the introduction that you can read to the visitor as well as the number of the next interview. The vehicle identification numbering is automatic. The key elements of the survey introduction include:

- Your name
- Your association with the Corps
- The reason for the survey
- A request for the visitors participation
- That a few moments of their time is required, and appreciated.

**Hello my name is JANE DOE. I am with the Corps of Engineers. We are surveying visitors here at Goodtime Lake so that we can better serve your needs. May I take a few minutes of your time to ask you some questions?**

## **Submodule 3.4 Entering Data on Computer**

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Periodically during the survey you will be asked if the information is correct. If the information is incorrect, you will be returned to the last position where the question was asked.

NOTE: At the end of each complete survey you will be provided a brief review screen and asked if the information is correct. If "yes," you will advance. If "no," you will be allowed to delete the record.

### **Vehicle Class**

After you have read the introduction to the visitor, enter the total number of axles.

**Total number of axles: 2**

**Enter "0" for refused.  
ALT F8 for traffic entry  
ESC to quit program**

Do not enter the number of axles in this field unless the visitor has agreed to be interviewed.

### **Number of axles:**

Record the total number of axles, including trailers, for each party exiting. If a number greater than 5 is entered, an explanation must be given to describe the vehicle.

**Passed Vehicles (PV):** There are only two reasons for passing vehicles: refusals and traffic.

**Refusals:** If the visitor refuses to be interviewed, explain that only a few moments of their time is required and the information is needed. If they again refuse, then enter a "0" under the number of axles. A confirm screen asking you to verify that the individual refused to be surveyed will appear and you can proceed to the next interview.

**Traffic Backup:** You may pass a vehicle only when five or more vehicles have backed up. Finish the survey you are on, pass four vehicles and then interview the fifth. Continue this pattern until less than five vehicles are in line to be interviewed. If the occupants refuse to answer questions, code as "refused."

If you need to pass a vehicle by at this point, you would enter it as a traffic entry by pressing the alternate (ALT) key and the function 8 (F8) key at the same time. A traffic entry cannot be made until an entry has been made previously. Also, two traffic entries

## Submodule 3.4 Entering Data on Computer

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in a row are not allowed. If you pick "ALT F8," you will be asked to wait while the entries are being processed.

### Quit

You can also exit from the program at this point by pressing the escape (ESC) key. A confirmation message will appear to give you a chance to reconsider the choice. There are certain situations when you need to exit the program, such as, ending a survey section, changing a battery pack, or when being relieved by another interviewer at the same location. **Do not** turn the computer off or "reboot" the computer before exiting the program. This could result in a loss of data.

### NRV, RV, or RRV

Once you have entered the number of axles, the next series of question that will appear will determine the vehicle type.

**RV:** A recreational vehicle is any vehicle whose occupants have participated in recreation during their visit to that area today. If the people in the vehicle used the area for recreation today, then respond accordingly. Then the program will continue and you will determine if their trip is complete.

**NRV:** A non-recreational vehicle is any vehicle whose occupants are not participating in recreation. If they are not using the area for recreation today, you will be prompted to describe the trip purpose. This could mean typing in "contractor," "corps worker," "resident," or other brief remark that will help describe the reason for the vehicle to be there. You will see a review screen and will be asked if your entry is correct. If you answer "yes," the program will go to the next interview.

**RRV:** A returning recreational vehicle is any vehicle whose occupants have been participating in recreation but will be returning to the project and to the area today. Since the visitor is returning to the project and the area, the interview will stop at this point. If the visitor is not returning to the area, then enter "no" and continue the interview.

### Number of People

Indicate the total number of individuals in the vehicle. Do not count people who are with the group but are not in the vehicle at this time. If the answer is more than 9, you will be asked to give a reason for the large number of people, e.g. "School Group" or "Church Bus."

## **Submodule 3.4 Entering Data on Computer**

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### **Length of Stay**

**Overnight use:** You will ask the visitors if they stayed overnight on the project. This includes camping and any other overnight accommodations on the project (e.g. houseboat, cabins, etc.).

**Other overnight use:** If the visitor stayed overnight, but did not camp, the survey may ask you to collect information about other overnight use. Then you will be prompted to ask where the visitor stayed. Enter a brief description of where the visitor stayed. Examples would include "houseboat," "fished all night," and "state park cabins." Your Project Survey Coordinator will describe what qualifies as "other overnight use" at the project and area.

### **Camping**

If the visitor camped at the project, you will determine if they camped at the area being surveyed.

If the visitor was not camping at this area, you will be prompted to give the number of day use hours from the visitor. If the visitor was camping at this area, you will ask how many nights were spent in the area.

If a number of nights greater than 14 is entered, you will be prompted for an explanation of the extended stay.

### **Day Use**

If the visitor did not stay overnight at the area, then day-use hours will be collected. Record the total number of hours spent in the day-use area. For those visitors who respond in half-hour increments round the even numbers down, e.g., 2 1/2 =2, 4 1/2=4, and the odd numbers up e.g., 3 1/2=4.

### **Commercial Accommodations**

Record the number of day users who have spent nights away from home in a commercial accommodation. These people are not overnight users at the project.

### **Project and Area Activities**

If the visitor is not returning to the project, then project activity questions will follow. The top of the screen will display the project name and the number of people in the vehicle.

## **Submodule 3.4 Entering Data on Computer**

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If the visitor is returning to the project, then project activities will be bypassed and only the area questions will be displayed. The top of the screen will display the area name and the number of people in the vehicle.

### **Multiple NRMS Areas**

If there is more than one NRMS area behind the survey site, then it will be necessary to assign the visitor's use to one of them. Determine where the visitor stayed the longest, highlight the choice, and press the enter key.

### **Project Activities**

Questions relate to the people in the vehicle and their use of the entire lake during this visit. Code the use of each facility or participation in each activity using the following guidelines:

- There can never be more people participating in any one activity than there are in the vehicle.
- Make certain all visitors are accounted for in some activity participation. Visitors can participate in multiple activities, but all visitors must be accounted for in the project activities. Sightseeing will appear only if the number of people in the vehicle have not been accounted for in project activities.
- When recording the number of people picnicking, note that campers can be recorded as picnicking only if they participate at a location other than their campsite.
- Enter a "Y" for yes and a "N" for no for questions about the use of facilities.
- If the visitors are fishing from the boat, waterskiing, or participating in another watercraft activity, also record them as boating. The number of participants recorded as boating include all persons participating in watercraft activities.
- Record the number of people involved in activities other than the ones listed. Describe all the other activities in which they participated.
- Use the sightseeing activity to indicate the number of people who did not participate in any of the above activities including project camping. Sightseeing is a mutually exclusive category.

## **Submodule 3.4 Entering Data on Computer**

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### **Only Area Visited**

If the visitor being surveyed has used only one area for recreational activities on their visit to the lake, then project activity and area activity use will be identical. If this is not the case, the program will proceed to area activities. You will be limited to asking questions about activities identified at the project.

### **ZIP Code**

Indicate the visitor's ZIP code. If the visitors do not know their ZIP code, record the county and state of origin in the remarks section. For a foreign visitor, code a "99999" and record the country's name. If the vehicle's occupants are from several locations, code only the party head or organizer, usually the driver. For groups, record the ZIP code of the organization.

### **Area Activities**

Entering data in this section is similar to entering data in project activities. The following differences are noted:

- For each activity participated in at the project, ask how many participated in that activity at the specific recreation area being surveyed. You will be limited to ask about activities or facilities identified at the project.
- All activities recorded under area information must also be listed under project activities with the exception of sightseeing (see below).
- All occupants of the vehicle must be accounted for under area activities. Sightseeing will appear only if the number of people in the vehicle have not been accounted for in area activities.
- If the vehicle's occupants used the boating facilities (e.g., dock or ramp) in the area being surveyed, then all boating activities should be listed under area activities. Watercraft use is assigned to an area if the visitors launched from the area.
- Enter sightseeing for the survey area only if the visitor participated in no other activities at the recreation area being surveyed.

### **Comments**

Before the survey ends you will be allowed to enter any comments the visitor might have about the survey, the project, or their visit.

## Submodule 3.4 Entering Data on Computer

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### Deleting the Record

While the review screen is displayed, you will be asked if the survey information is correct. If the data is wrong, you will be asked if you want to delete the record. Use this option only as a last resort since the visitor will be delayed to complete another interview. If the information is correct, you will proceed to the introduction for the next interview.

### **Step 6. Exiting the Program**

When you are finished, exit the program by returning to the screen asking for the number of vehicle axles. At this point you will be given the option to quit (ESC) and prompted to enter the date and time.

### **Assignment — Entering Data**

1. Using your computer, code the following scenario.

Joe and Jane Camper and their two children Pete and Sue were camping at Panther Paw Creek for 4 days and 3 nights and are returning home to the Big City (ZIP code 54321). They are driving their car (2 axles) and are towing a tent-camper (1 axle). The children's grandparents are following in another car.

While they were at Good Time Lake, they ate picnic lunches at the picnic area and dinners at the campground. They all went canoeing at Panther Paw Creek and Pete was fishing from the canoe while his parents paddled. Every day Pete and Sue went swimming with their mother and grandparents. No one in the family visited any other recreation area at Good Time Lake.

They had planned on visiting another park also but stayed at Good Time Lake because it was beautiful. Their only wish was that the comfort stations had had showers.

#### **Did You**

- Identify the file and verify the header before the survey started?
- Bring spare batteries?
- Word the questions exactly as they appear on the screen?
- Exit the program properly?



## MODULE 4 — WRAPPING IT UP

### Submodule 4.1 Taking Down The Survey Site

#### Introduction

Once the interview period is over, you will need to take down the survey site and secure the survey equipment.

#### Objectives

After completing this submodule, you will be able to:

- Accurately determine the appropriate time to conclude the survey
- Take down the survey site
- Secure the survey equipment

#### Concluding the Survey

Don't stop surveying early to pack up the equipment; you must survey until the end to ensure that your data is representative. This means if your survey period is scheduled for 9:45 a.m. until 12:10 p.m. at the Picnic Area, you must stay there and conduct interviews right up until 12:10 p.m. Even if no one is there to interview, don't pack up. You never know who might exit in the final few minutes of your survey period.

#### Taking Down the Survey Site

When the survey period has ended, you will need to collect all the traffic control devices and survey equipment for storage. Unless you are told otherwise, there is probably no best order in which to collect the equipment. You might be advised, however, to remove the stop sign first to restore normal traffic flow. Be sure to secure your portable computer system as soon as possible. To protect you while you're packing up, leave your safety vest on, and the traffic cones up while you collect the rest of the equipment. When you think you're done, take a second look around to make sure you haven't forgotten anything.

#### Equipment Checklist

- "Stop" sign
- "Tourism Survey Ahead" sign
- "Road closed" sign
- Barricades
- Questionnaires and survey forms / computers & Disks
- Pencils and erasers
- Corps hats, name plates
- Safety vest
- Survey plan and instructions
- Watch
- Project brochures
- Water supply
- Lights
- Other additional equipment

### Securing the Survey Equipment

Once you've collected all the survey equipment, make it secure by storing it in the designated space. Putting it away in an orderly manner will make it easier for the next interviewer to find it. If a piece of equipment is missing or damaged, report it to your supervisor at the end of the survey period so that a replacement can be found before the next interviewer conducts surveys.

#### **Remember**

- Take down all the equipment at the survey site.
- Secure the equipment in the designated space.
- Report all damaged or missing equipment.



## MODULE 4— WRAPPING IT UP

### Submodule 4.2 Delivering the Survey Data

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#### Introduction

With your survey period completed and all of the equipment put away, you're ready to review your surveys, edit them for errors, and deliver them for input and analysis.

#### Objectives

After completing this submodule, you will be able to:

- Edit your survey data for errors
- Identify and correct logic errors in data entry
- Identify and correct range errors in data entry
- Identify and submit the correct computer files (if you are using the DDES system)
- Deliver the survey data in the proper manner

#### Editing Survey Data On ENG Form 4835

Before you deliver the survey data, you need to make a final editing check by hand to be sure each form is complete and correct. After separating the surveys into weekday and weekend for each specific survey location, there are two major sections to check: the header and the data component.

#### Header Information

Check to see that:

- The project name and NRMS number are the same on all forms.
- The survey site name and area NRMS number are the same on all forms for each survey site.
- The weekday/weekend code is recorded and correct.
- The survey date on all forms is the beginning Monday date.
- The percent of total traffic on weekdays was calculated correctly (meter readings should be listed in the survey log) and entered on both weekday and weekend cover pages.
- Survey season is recorded and is correct on all forms.
- The meter type (pneumatic versus magnetic loop) and the direction of traffic crossing the meter is properly recorded.
- The direction of traffic crossing the meter is indicated.
- Your name is recorded in the interviewers block.
- The sheet number is recorded.

## Submodule 4.2 Delivering the Survey Data

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### Data Information

In the survey data, check to see that:

- All entries are legible.
- All ID numbers are unique.
- Either a "0" or a "1" is recorded in columns 15, 16, 17, 20, 21, and 56 if any of the vehicle occupants have been participating in recreation in the surveyed area.
- If the visitors are returning to the area, there should be no entries beyond column 17.
- If the party was camping at the area, the number of nights camping should be recorded. If the party was not camping at the area, the hours of day use should be recorded, even if the group was camping elsewhere on the project.
- Use of project facilities, like picnic area or launch ramp, should be coded "yes" = 1 or "no" = 0, and not the number of people who used the facilities.
- The number of people participating in any single activity does not exceed the number of people in the vehicle.
- Columns 31-32 (persons boating) are completed if any other boating activities are recorded.
- All people in the vehicle are accounted for under project and area activities.
- If this was the only area visited ("1" in column 56), no entries should be made in columns 57-75.

### **Checking for Logic Errors**

The editing tips above are fairly straightforward, however, you will also need to check for errors in logic. Logic errors are not simple cases of incomplete or illegible data, but rather places where you might have put in the wrong answer or asked the wrong question of visitors. For example, you may have committed a logic error if you collected and filled out the day use hours spent in the area when the visitors had been camping overnight in that area. Be aware of the possible questions that might lead you into logic errors before you survey — if you don't catch these errors until afterwards you will have to leave the information blank and the survey information will be incomplete.

Some of the places you might be more likely to make logic errors include:

- Whether or not visitors are returning to any recreation area or to this recreation area (Review page 25 in submodule 3.3).
- Data collected on number of nights camping and number of hours of day use (Review page 26 in submodule 3.3)
- Sightseeing participation for both project and area activities (Review page 28 in submodule 3.3).

## Submodule 4.2 Delivering the Survey Data

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### Checking for Range Errors

Range errors occur when the data entered is inconsistent, for example, when there are 4 people in a vehicle, and 5 people are recorded as swimming.

### Verifying Computer File Names

For those of you using the computer DDES system, you will need to make sure that you can identify the correct computer files to be delivered. The following information is provided to assist you in identifying the correct files.

- Weekday survey files will end with the suffix DAY, while weekend survey files will end with the suffix END.
- The season the survey was conducted is noted by a number between 1 and 5 at the beginning of the file name (Spring=1, Summer=2, Fall=3, Winter=4, Holiday=5).
- The 7 letters that follow the season number on the file are the area name. Note: sometimes the area name is shortened because it is limited to only 7 characters on the computer program.

If you had to deliver the spring survey data to the project survey coordinator for Panther Paw Creek Recreation Area, you would select the following files:

1PANTPAW.DAY and 1PANTPAW.END

### Delivering the Survey Data

Once you have reviewed, edited and organized the survey forms (or files if you are using the computer DDES system) you are ready to deliver the data. Since projects process their survey data differently from one another, follow the directions for delivering the survey data that are specified by your Project Survey Coordinator. Use the space below to make a note of how and where to deliver your survey data.

<b>Individual Survey Data Delivery Instructions</b>	
<b>Project Name:</b>	_____
<b>Survey Site Name:</b>	_____
<b>Area Name:</b>	_____
<b>Deliver Data To:</b>	_____
<b>Location:</b>	_____
<b>When to Deliver Data:</b>	_____

Figure 4.2.2 Survey Delivery Instructions

## Submodule 4.2 Delivering the Survey Data

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### Assignment — Survey Form Editing

Check the following two survey forms for coding errors. The first sheet is from the weekday survey and is the only sheet. The second sheet is from the weekend survey and is the last of nine sheets.

1. Using the survey forms and survey schedule provided in figures 4.2.3 - 4.2.5, check the header information for coding errors.
2. Check the data lines for range and logic errors.

#### **Remember**

- Review and edit your forms for errors in the header and the data.
- Be particularly watchful for logic and range errors.
- Verify the computer file names you need to submit.
- Deliver the data as specified by the Project Survey Coordinator.





# SURVEY SCHEDULE

PROJECT NAME : Good Time Lake

WEEK OF:

AREA NRMS#:

SURVEY SITE NAME:

PROJECT NRMS# : 10203

June 3,

17

South Shore

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
1 0715- 0950					South Shore	South Shore	
2 1005- 1240	South Shore						South Shore
3 1255- 1530			South Shore			South Shore	
4 1545- 1820				South Shore			South Shore
5 1935- 2110		South Shore				South Shore	

Figure 4.2.5 Survey schedule for use with edit exercise.

## **REFERENCES**

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**(Local Survey Plan to be provided by Project Survey Coordinator)**

## REFERENCES

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### Acronyms and Symbols

ALT	Alternate key on a computer
DDES	Direct Data Entry System
ENG 4835	Engineering Form 4835
ER	Engineering Regulation
ESC	Escape key on a computer
F8	Function 8 key on a computer
ID	Identification number
NRMS	Natural Resource Management System
NRV	Non-recreational vehicle
ORV	Off-road vehicle
PV	Passed vehicle
RV	Recreational vehicle
RRV	Returning recreational vehicle
RETURN	Return or enter key on a computer
SSG	Student study guide - this manual
USACE	U. S. Army Corps of Engineers



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## REFERENCES

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### Glossary

**Area NRMS #:** The area NRMS number or code is the Natural Resource Management System number that is unique to each area at a project.

**Direct Data Entry System:** The Direct Data Entry System (DDES) is a computer-generated questionnaire program that runs on a portable computer and can be utilized for entering survey data directly instead of using paper forms.

**ENG Form 4835:** Engineering Form 4835 is the paper form on which survey data is entered. It consists of two parts: the header or top of the survey and the space to record the data from each interview.

**Logic Errors:** Logic errors occur when the interviewer asks the wrong question in sequence to the visitor or records the wrong answer (see submodule 4.2 for more information) .

**Magnetic Loop Traffic Meter:** A magnetic traffic meter is a traffic meter that is triggered by metal objects, i.e., car engines, and counts each vehicle (car and trailer) as it crosses the meter.

**Natural Resource Management System (NRMS):** NRMS is a computerized inventory that includes information about project facilities.

**Non-Recreational Vehicle (NRV):** Non-recreational vehicles are vehicles whose occupants are not participating in recreation at the surveyed area. If the vehicle occupants are participating in recreational activities at another recreation area and are just passing through the survey area, the vehicle is a nonrecreational vehicle in this area. Non-recreational vehicles also include Corps vehicles, commercial vehicles, concession vehicles, law enforcement vehicles, etc.

**Passed Vehicle (PV):** Passed vehicles are those vehicles that are not surveyed (passed) because: 1) the person contacted in the vehicle refuses to be surveyed, or 2) enough traffic backs up so that a lengthy delay for other visitors occurs.

**Pneumatic Hose Traffic Meter:** A pneumatic traffic meter is a meter that utilizes a rubber hose placed across roadways that is incremented by axle of a vehicle that crosses the hose.

**Project:** The project consists of the reservoir or lake and surrounding lands owned by the Corps.

## REFERENCES

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**Project Name:** The project name is the name of the Corps project.

**Project NRMS #:** The project NRMS number is a unique code given to each project in the NRMS.

**Project Survey Coordinator:** The Project Survey Coordinator is the individual at each project who is in charge of the survey, including setting the schedule and overseeing data collection.

**Return Recreation Vehicle (RRV):** An RRV is a return recreation vehicle whose occupants participated in recreation and will return to the area sometime during that day.

**Recreation Vehicle (RV):** An RV is an area recreation vehicle whose occupants participated in recreation in the surveyed area and will not return to the area that day.

**Range Errors:** Ranger errors are data that is entered inconsistently, for example: when there are 4 people in a vehicle and 5 people are recorded as swimming.

**Recreation Area:** The recreation area consists of a park or developed facility on a project for recreation. These recreation areas may have facilities for camping, picnicking, fishing, boating, etc.

**Survey Plan:** Each site has a specific survey plan written by the Project Survey Coordinator. This plan contains particulars on the survey procedures to be utilized at your project. Equipment lists, a survey schedule, and any special instructions for the survey site set up are just some of the things that are often included in the survey plan.

**Survey Site:** The survey site is the location where the interviewer stands to conduct the survey. Each survey site is located near a traffic meter.

**CORPS OF ENGINEERS TRAFFIC-STOP RECREATION USE SURVEY**  
 USE IN CONJUNCTION WITH ENG FORM 4835, DATED AUG 83.

MARCH 1985

● **HELLO, MY NAME IS \_\_\_\_\_ I AM WITH THE CORPS OF ENGINEERS. WE ARE SURVEYING VISITORS AT \_\_\_\_\_ SO THAT WE CAN BETTER SERVE YOUR NEEDS. MAY I TAKE A FEW MINUTES OF YOUR TIME TO ASK YOU SOME QUESTIONS?**

COLUMN	QUESTIONS & INSTRUCTIONS	COLUMN	QUESTIONS & INSTRUCTIONS
11-13	Code sequential numbers for every exiting vehicle (car, car & trailer, etc.) passing the survey site	PROJECT USE	● <b>THE FOLLOWING QUESTIONS RELATE TO THE PEOPLE IN THIS VEHICLE AND THEIR USE OF THE ENTIRE LAKE DURING THIS VISIT.</b>
14	Number of Axles Record number of car & trailer axles. CONTINUE. If passed vehicle (Refused or traffic) Code "0" END.	26-28	● <b>HOW MANY PEOPLE PICNICKED (CAMPER: AT A LOCATION OTHER THAN YOUR CAMPSITE)?</b> <input type="checkbox"/> <b>IF NOT PICNICKING</b> CONTINUE AT COL 29. <input type="checkbox"/> <b>IF PICNICKING</b> Record number (COL 26-27). ● <b>DID YOU USE PICNIC FACILITIES?</b> <input type="checkbox"/> <b>IF NO</b> CONTINUE. <input type="checkbox"/> <b>IF YES</b> Code "1" (COL 28) CONTINUE.
15	Vehicle Type ● <b>DID YOU USE THIS AREA FOR RECREATION TODAY?</b> <input type="checkbox"/> <b>IF RECREATION VEHICLE (RV)</b> Code "0". CONTINUE. <input type="checkbox"/> <b>IF NONRECREATION VEHICLE (NRV)</b> Code "1". END.	29-30	● <b>DID YOU USE ANY OF THE FOLLOWING FACILITIES?</b> Read facility types from survey form <input type="checkbox"/> <b>IF NO</b> CONTINUE. <input type="checkbox"/> <b>IF YES</b> Code "1" (Appropriate COL) CONTINUE.
16-17	Recreation Vehicles ● <b>WILL YOU BE RETURNING TO ANY RECREATION AREA ON THIS LAKE TODAY?</b> <input type="checkbox"/> <b>IF NO</b> Code "0" (COL 16 & 17) CONTINUE AT COL 16-18. <input type="checkbox"/> <b>IF YES</b> Code "1" (COL 16) ● <b>WILL YOU BE RETURNING TO THIS AREA TODAY?</b> <input type="checkbox"/> <b>IF NO</b> Code "0" (COL 17) CONTINUE. <input type="checkbox"/> <b>IF YES</b> Code "1" (COL 17) END.	31-48	● <b>HOW MANY PEOPLE PARTICIPATED IN THE FOLLOWING ACTIVITIES DURING THIS VISIT TO THE LAKE?</b> Read activities from survey form Record number (COL 31-48) CONTINUE. ● <b>WHAT OTHER ACTIVITIES DID MEMBERS OF THIS PARTY PARTICIPATE IN? HOW MANY PARTICIPATED?</b> Record number (COL 47-48) and activity (if-headers)
18-19	People in Vehicle ● <b>HOW MANY PEOPLE ARE IN YOUR VEHICLE NOW?</b> Record number (COL 18-19) CONTINUE. Example: A party of 3 would be coded "03".	49-50	Significance: An individual should be recorded as signifying only if he or she did not participate in any other activities. Record number (COL 49-50) CONTINUE.
20-21	Camping ● <b>HAVE YOU BEEN CAMPING ON THIS VISIT TO THIS LAKE?</b> <input type="checkbox"/> <b>IF NO</b> Code "0" (COL 20 & 21) CONTINUE AT COL 24-25. <input type="checkbox"/> <b>IF YES</b> Code "1" (COL 20) ● <b>WERE YOU CAMPING AT THIS AREA?</b> <input type="checkbox"/> <b>IF NO</b> Code "0" (COL 21). CONTINUE AT COL 24-25. <input type="checkbox"/> <b>IF YES</b> Code "1" (COL 21) ● <b>ON THIS TRIP, HOW MANY NIGHTS HAVE YOU CAMPED AT THIS AREA?</b> Record number (COL 22-23) CONTINUE AT COL 26.	54	● <b>IS THIS THE ONLY AREA THAT YOU HAVE BEEN TO FOR RECREATION DURING THIS VISIT TO THE LAKE?</b> <input type="checkbox"/> <b>IF NO</b> Code "0". CONTINUE. <input type="checkbox"/> <b>IF YES</b> Code "1" CONTINUE AT COL 61-63.
24-25	Day Use ● <b>HOW MANY HOURS DID YOU SPEND AT THIS AREA TODAY?</b> Record number (COL 24-25) CONTINUE. One hour minimum	AREA USE	● <b>FOR THOSE ACTIVITIES YOU PARTICIPATED IN AT THE LAKE, HOW MANY PEOPLE PARTICIPATED IN THOSE ACTIVITIES OR USED THOSE FACILITIES AT THIS AREA?</b> Read project activities and facility-use questions which the visitors responded to previously (COL 28-50) if the visitor did not participate in any activity recorded at the project (their Area Camping COL 21), record signifying Record number (COL 51-75) CONTINUE
		ZIP CODE	● <b>WHAT IS YOUR ZIP CODE? WE NEED TO KNOW WHERE YOU STARTED FROM ON THIS VISIT TO THE LAKE.</b> Use only ZIP code if in US or Canada only and state in 16-months.
			● <b>THANK YOU WE APPRECIATE YOUR COOPERATION END.</b>

Use-estimation questionnaire. To be used in conjunction with ENG Form 4835, dated August 83.

## Student Study Guide — Answers

### Submodule 2.2 Meter Readings

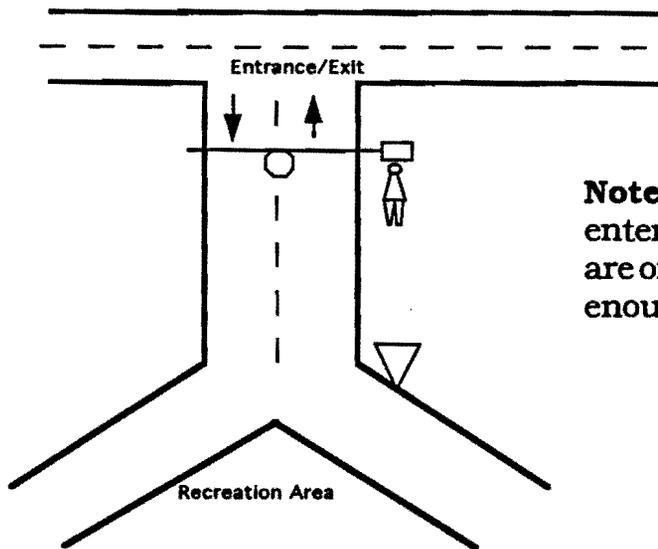
#### Panther Paw Creek

- 1 Monday 7th at 710 or earlier
- 2 Friday 11th at 1955 or later
- 3 Monday 14th at 710 or earlier

#### Piney Hill Picnic Area

- 1 Monday 7th at 710 or earlier
- 2 Friday 11th at 1955 or later
- 3 Monday 14th at 710 or earlier

### Submodule 2.3 Set Up



**Note:** This solution assumes that the 'Y' roads entering and exiting the actual recreation area are one-way or that the volume of traffic is small enough to be handled by a single interviewer.

### Submodule 3.1 Recreation Definitions

1. The answer to question one will vary by project, the facilitator should prepare proper settings and responses.
2. The answers to question two are as follows:
  - A. NRV — contractor
  - B. RV — sightseeing
  - C. RRV — returning to the area today
  - D. RV — picnicking
  - E. None — answer is NRV only when in conjunction with a regular patrol. If the purpose was to see the survey crew then no entry is made.
  - F. RV — If the visitor is not certain that he or she will return, treat the visitor as if they are leaving for the last time and interview them. (Currently sightseeing)

## Submodule 3.2 Wording Questions

The **best** option for rewording the misunderstood questions is as follows:

### Paper Format

1. a
2. c
3. a
4. b
5. a
6. c
7. b
8. d — avoid group since we are dealing with vehicle occupants and a group might include people in other vehicles.

### Computer Format

1. c
2. b
3. c
4. b
5. a

## Submodule 3.3 Data Entry

1. A correctly completed header for ENG 4835 is included below.

<b>CORPS OF ENGINEERS RECREATION-USE SURVEY</b>		PROJECT NAME <b>GOOD TIME LAKE</b>				SURVEY SITE <b>PAWNER PAW CREEK</b>		DATE <b>1/13/03</b>		SHEET NUMBER <b>14</b>	
WEEKDAY (1) or WEEKEND (0) <input type="checkbox"/>	SURVEY SEASON 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/>	BEGINNING DATE OF SURVEY PERIOD <b>05/31</b>	DAY MO YR <b>11 12 13 14</b>	PERCENT OF TOTAL TRAFFIC ON WEEKDAY <input type="checkbox"/>	METER TYPE <input checked="" type="checkbox"/>	DIRECTION OF TRAFFIC <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>	INTERVIEWER <b>PN</b>	SHEET NUMBER <b>104</b>		

2. Mistakes on the data portion of the form are as follows:

- Every hour on the hour should be noted in the remarks section.
- The wrong survey date (6/3) was entered in the remarks column.
- The date should be noted in the last data line.
- The survey log should be completed.
- The ID numbers assigned to each vehicle should be sequential. Numbers 629 and 630 are reversed.
- In line 1, the person was coded as a recreation vehicle but was not interviewed. Were they a refusal? If so, this should be entered in the remarks column.
- The NRV in line 2 should have an explanatory comment in the remarks section.

## Student Study Guide — Answers

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- In line 2, the number of persons (columns 18 and 19) should not have been coded since this vehicle was an NRV.
- In line 3, if three bikes did exit they should have been interviewed as three separate vehicles. Otherwise the following points on line three hold true.
- In line 3, one person was unaccounted for in activity participation.
- In line 3, the number in columns 24-25 for day use hours was probably transposed (range error) since it would be impossible to recreate for thirty hours as a day-use visitor.
- In line 3, there should either be a "0" or a "1" coded in columns 16 and 56. Because there was no entry made in column 56, we have no way of knowing whether or not the interviewer should have asked the activity questions.
- In line 4, data in column 22 is unreadable.
- In line 4, a comment in the remarks section should be included to explain the three individuals who were participating in other activities (columns 47-48).
- In line 5, the number of people were not coded in column 18-19, therefore we are unsure if they were all accounted for in recreational activities.
- In line 5, there should either be a "0" or a "1" coded in column 56. Because there was no entry made in column 56, we have no way of knowing whether or not the interviewer should have asked the activity questions.

### Submodule 3.4 Entering Data

Proper coding on the computer would include the following points:

Axles — 3

Recreation vehicle — Yes

Returning to the project — No

Returning to the area — No

Number in car — 4

Project camping — Yes

Area camping — Yes

No. nights camping — 3 nights

Project Activities

    Picnicking — 4

    Swimming — 2

    Watercraft — 4

        Fishing from boat — 1

        Other watercraft — 3 (canoe/pleasure boating)

Only area visited — Yes

Primary destination — Yes

ZIP — 54321

## **Student Study Guide — Answers**

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### **Submodule 4.2 Survey Form Editing**

1. The following mistakes were noted on the headers of the two forms:

- The header on the weekday survey was perfect except the Project NRMS# is incorrect, the direction of traffic (block 20) conflicts with the data in the survey log, and the interviewers did not sign their names in the Interviewer block.
- In contrast, the header on the weekend survey is unreadable and inaccurate.
- While the Project NRMS# is wrong, it should also be right-hand justified (same for the Survey Site NRMS#).
- Both the Project Name (blocks 26-45) and the Survey Site (blocks 46-70) should be spelled out properly, using no short forms, with one space between each word.
- Many of the numbers in the blocks (e.g., blocks 9, 10, 17, 18, 19 and 20) are unreadable.
- The date in blocks 11-16 should be the Monday date of the survey week not the day the survey was conducted.
- The survey log does not include meter readings, so we cannot verify the data in blocks 17 and 18.
- The sheet number should read 9 of 9 if this is the last sheet of nine for the weekend survey.
- Interviewer name is missing.

## **Student Study Guide — Answers**

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2. Range and logic errors on the data lines are:

### Weekday Survey

- In the remarks block, the last time block is not accounted for.
- In line 1, the number of people was not recorded.
- In line 1, both camped at the area and spent day use hours were completed.
- In line 1, if picnicking at the area the visitor should be picnicking at the project.
- In line 1, if used picnic facilities at the area then should have used picnic facilities at the project.
- In line 1, if only area visited was Yes (1) then no information should be coded beyond this point.
- In line 1 and 3, since the vehicles were NRV's, the interview should have stopped and an explanation been listed in the remarks block, e.g., trash pickup.
- In line 2, the visitor can not return to the area without returning to the project.
- In line 4, column 56 was not filled out.
- Lines 4 and 5 have the same ID numbers.
- In line 4, day use hours was not completed.
- In line 5, the interviewer did not code whether the RV was returning to the project or to the area.
- In line 5, if the visitor refused an interview, a 0 should have been coded in column 14 not column 15.
- In line 7, fishing from shore at area should also be recorded at the project. If respondents were fishing from shore at the project, they cannot be sightseeing at the project.
- In line 8, no people were coded as in the vehicle.
- In line 9, the interview indicated the number of nights camped but didn't code where they group camped (project or area).
- In line 10, an individual indicated they were ice fishing in spite of the fact that this was a summer season survey.
- In line 14, more people participated in an activity than were in the group.
- In line 15, group members did not participate in any activity including sight seeing.

### Weekend Survey

- The survey log and remarks are not filled out correctly.
- No survey start time is listed in the remarks block.
- A mistake in line 5 has not been erased and could be misunderstood.
- Lines 1 through 4 are NRV's, but there was no indication of why surveys were not completed for these vehicles.

## **Student Study Guide — Answers**

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- In line 3, three bikes should have been treated as separate vehicles
- In line 6, three people indicated they were doing some other activity but it was not noted in the remarks section what that activity was.
- In line 8, there is no need to code zeros beyond column 56.
- In line 9, there was not indication of whether this was the only area visited.
- In line 9, the number of people in the vehicle was not coded.

There are probably more errors—see if you can find them.