

Mapping Field Guide

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Overview

When the Matilija Coalition completed two large GPS mapping projects – in Matilija Canyon in Ojai, and along Ventura County’s coast – we learned that a mapping field guide would have streamlined the process. Thus we collected our observations and compiled several suggestions for any individual or group conducting mapping and data-collection projects of any scale.

Preparing for Field Work

A mapping project is not entirely fieldwork. To the contrary, productive fieldwork is contingent upon methodical preparation at home and at the office. Before beginning, ask a few broad questions:

What needs to be accomplished? This is the most important, but occasionally ignored question. Does the project fit into the mission of your organization, and within its capabilities? How will the collected data be used?

When must this project be completed? Be aware of any time restrictions affecting the completion of the project. Seasonal, budgetary, or organizational conditions can all limit the amount of time dedicated to a task. Set realistic goals. If in doubt, or the completion time is not clear, start a smaller pilot project and proceed from there.

Who is needed to accomplish this task? Designate the appropriate people for each part of the project, and what is expected of each party involved. If roles are not clearly defined, the project – especially if it is large and complex – might never be completed.

Are similar projects in existence? Learn from others’ work. If possible, avoid redundancies by thoroughly researching related projects.

Is a permit required to conduct the fieldwork? Permits or permission may be required for parking, hiking, or property entrance. Research this thoroughly to ensure all mapping activities are lawful.

What equipment is needed? List every activity involved with mapping: hiking/walking, writing, recording, navigating, etc. Create protocol and divide labor accordingly. Be sure that each volunteer participates and learns every job. This assures progress in the absence of one or more workers.

How will data be recorded? If using paper data sheets, always carry a sufficient quantity, especially during the beginning of the project when mapping volume is not clear. Using

two storage folders is best – one should use both a working folder and a storage folder. The field is hard on paper pages, so each day completed data sheets should be removed from the working folder and placed into the storage folder. However, leaving the last page for the next day's crew may aid locating the last point mapped.

It is also best to use a compact system for recording data. Binders protect pages from moisture and wear, but are clumsy to handle in rough terrain or thick growth. Clipboards are the handier option but leave the data sheets exposed to the elements and rough treatment. A compromise is packing the working folder for field storage, and using the clipboard for recording data.

In addition, condense the data collection format. If there is one page for every feature (outfall, plant, structure, etc.), the amount of paper soon becomes difficult to handle. Try to fit more than one feature on each page. For example, when the Matilija Coalition mapped clumps of non-native *Arundo donax* in Matilija Canyon, each sheet fit the data for five plants.

What sustenance is needed? Pack the appropriate amount of water and food when spending more than a few hours in the field. Also be sure to take foods that pack well and provide ample nutrition. Remember, if restrooms are not available prepare accordingly.

Is transportation organized? If possible, use two cars if mapping a coast or surveying long stretches of land. Avoid backtracking by leaving one car at the end of the survey area. Of course, use reliable transportation when mapping remote areas.

Is mapping continuous? Develop a system of continuity if a mapping project will last more than a few days. Carefully review the survey area before mapping; if different crews map from one day to the next, the prior days' survey area and the end point must be clearly marked or described. A useful tool for this task is the "Go To" or "Find" function on most GPS units. Returning to the end point designated by the prior crew, or simply returning to the last point mapped, prevents missing an area or mapping it twice.

In the Field

Of course, the biggest concern during fieldwork is safety and health. With this in mind, remember the following:

- *Drink plenty of water - don't wait until you are thirsty.*
- *Move cautiously when navigating loose or precipitous terrain. That big rock sometimes moves from under you.*
- *Pack a cell phone.*
- *Pack a topographical map, even if carrying a GPS unit.*

- *Wear bug repellent in the wilderness.*
- *Pack a first aid kit that includes antiseptic, bandages, gauze, tape, and aspirin.*

Few things in mapping are more frustrating than inadequate or incomplete data. With this in mind:

- *Write down as much information as possible.* Describe locations, landmarks, material, etc. – more information is better than too little.

Wrapping Up

At its conclusion even a simple mapping project will have mountains of data. Raw data is only useful to those familiar with the project, so it is important to turn out a polished product that summarizes the mapping activities clearly. Things to remember:

- *Write a summary.* Write a single paragraph version that describes the goals, activities, and conclusions in detail. Also write a longer, more detailed version. Documentation serves as a precedent for future projects, and shows funders how their money was spent.
- *Store data in a simple, coherent format.* Data should be kept together. For example, all data sheets should be attached or organized in a single binder, or if more space is needed, several similar, well-marked binders or boxes. Back up hard-drive data onto a ZIP disk, CD, or floppy and label clearly. If several are required, label the specific contents in pen or marker on each disk or CD. Careful organization eases data integration into Geographic Information Systems (GIS) programs such as ArcView®, and prevents confusion and loss of information in the future.
- *Write a status report.* Give specific instructions on how to proceed if another party must complete the project. The effort required to finish an incomplete work can be greater than starting a new project.
- *Spread the word.* A project is futile if few see the results. Network with those interested or with similar projects, and post the information on websites, in newsletters, or wherever appropriate.